FOCUS

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**MITCH ON THE MIC**

Comedian Mitch Hedberg drew laughs with his random humor at a sold-out show at the Ferst Center this past Monday. **Page 23**

**CONFUSING CANCER CELLS**

Associate Professor Andrew Lyon may have the secret to a gentler form of chemotherapy—in the form of tiny balls of gel. **Page 17**

# Athletic program wooing wider audience

## *Marketing campaign hopes to create ties, establish Jackets as "Atlanta's hometown team"*

By Kyle Thomason
*Assistant Sports Editor*

Over four million people call Atlanta's metropolitan area home—but only one major college football team plays its home games within the region's bounds.

That distinction is something that Tech's athletic department is hoping to capitalize on. With the recent expansion of Bobby Dodd Stadium creating empty seats for many home games, the athletic department has begun to look outside of its traditional audience: students and alumni.

Instead, Tech is looking to market itself to the community as "Atlanta's hometown team."

"With four million other people here in the metro area, that's the most likely target population," explained Paul Griffin, senior associate director of athletics. Griffin has experience in this area—he saw great success from a similar marketing campaign that occurred during his tenure as director of athletics at the University of South Florida.

"We started college football at the University of South Florida in the late '90s. At that time, it proved to be the most successful launch of a college football program and the most rapid ascent to Division 1-A status. We sold over 20,000 season tickets and had over 50,000 people at our first game," Griffin said.

Griffin and his staff at USF had to look toward the community to be successful with the new program. "The Tampa-St. Pete area has over three million people, so we tried to develop a sense of 'we're your team,'" he said.

However, Atlanta is very different from Tampa and provides challenges for any sports team entering the market. The city has notoriously fair-weather fans, and even though Tech is the only college sports team, there are many other popular teams, such as the Braves and the Falcons, flooding the city as entertainment options.

"People have a lot of choices in Atlanta with what to do with their time and their money," Griffin said. "You have to distinguish yourself."

In order to differentiate Tech's sports programs, a major selling point is the college atmosphere. According to Griffin, Tech provides a much more colorful and passionate setting than the professional teams in the area.

However, Eric Manley, a second-year Industrial Engineering major, does not think this will be enough to sell tickets. "People would rather pay to see a successful professional franchise such as the Atlanta Braves or the up-and-coming Falcons play, as opposed to seeing a college team with whom they have no affiliation," he said.

Another problem Tech faces is that it does not get the support from scholastically unaffiliated fans that other schools—namely, the University of Georgia—receive.

"Some people perceive the University of Georgia to be every-man's university and Georgia Tech is a specialized program that's unique," Griffin said. "That's something we have to overcome."

Dennis Matovu, a sixth-year Management major, agreed that this perception could be a problem. According to personal experience, "It's a tough gig, because the majority of people we interact with outside of campus on a daily basis are Georgia fans," he said.

By encouraging more people outside of the inner circle of Tech to come out to Bobby Dodd Stadium, it is possible to attract more young fans and have them grow up supporting their hometown school.

Part of an additional intriguing

See **Atlanta's Team**, page 15

Photos by Christopher Gooley and Ayan Kishore, collage by Jamie Howell / STUDENT PUBLICATIONS

# Hurricanes' impact felt on campus and at home

By Joshua Cuneo
*Senior Staff Writer*

Many students at Tech spent last week deciding how to stay dry in the face of heavy torrential rains.

However, a few from Florida, Alabama and the Caribbean were more concerned with the safety of their hometowns, which were under the looming threat of some of the worst hurricanes the region has seen in years.

"We always keep an eye on hurricanes coming...so as it turned going to Jamaica, we knew it was just going to go right through," said Matthew Fong, a first-year Computer Science major from Miami whose extended family resides in Jamaica.

But Fong said he didn't lose any sleep over it.

"Hurricanes are just normal...I wish I was down there. I enjoy hurricanes," he said.

For other students, the experience was more nerve-wracking.

"I was...anxious for my family since I was far away," said David Benson, a fourth-year Computer Engineering major. His town of Orlando, Florida suffered from both hurricanes Charley and Frances.

Benson kept in touch with his family throughout the storm, as did Nathan Zick, whose family also decided to risk weathering the storm in their home.

"The newscasters actually advised people that they would be safe in their houses," said Zick, a fifth-year Industrial Engineering major, of the impact of Ivan on his home in Mobile, Alabama.

"This reassured [me], and when I talked to my family, they were not all that worried, which helped me," he said.

> "It was exciting and scary at the same time to think about this storm of possible destruction hitting your home."
>
> **Nathan Zick**
> Fifth-year IE major from Mobile, AL

Other students were home for the storm and played host to relatives who were under mandatory evacuation.

"In Miami, my grandparents went down to my house, and then my cousin, [who] was flying back to Jamaica...stayed at my house as well because his flight was cancelled. So it was basically a full house," Fong said.

Sarah Dodge, a fourth-year Industrial Engineering major, was home for two hurricanes and said she was simply relieved to be with her family.

"It was comforting because the phone lines weren't working so hot, so...the communication would have been bad," Dodge said, whose hometown of Lakeland, Florida was hit by both Charley and Frances.

But, she added, "I think it would have been a very stressful situation for me either way, whether I was in Florida or in Atlanta."

According to Dodge and others, sitting out a hurricane can be an intense experience. Students have tales of being trapped in their houses in the dark for hours with solid wind and rain pounding on their walls.

"The wind sounds...like a jet engine," Dodge said. "The first night Charley started affecting our area...we took shifts sleeping...Whoever was awake was...in charge of bringing everyone downstairs and getting into the bathroom, because that's where you needed to be [if the storm got too intense]."

For students watching from the outside, being far from the eye of the

See **Hurricane**, page 21

**IN THEIR WAKE:** HURRICANE STATISTICS

**CHARLEY**

**Category:** 4
**Formed:** August 9, 2004
**Maximum Wind Speed:** 180 mph
**Estimated Damages:** $14 billion
**Estimated Casualties:** at least 32

**FRANCES**

**Category:** 4 | **Formed:** August 24, 2004
**Maximum Wind Speed:** 145 mph
**Estimated Damages:** $2-$15 billion
**Estimated Casualties:** at least 15

**IVAN**

**Category:** 5 | **Formed:** September 2, 2004
**Maximum Wind Speed:** 165 mph
**Estimated Damages:** $5-$15 billion
**Estimated Casualties:** at least 115

# Advertising, sponsorships seek to promote Jackets as hometown team

## Atlanta's Team

Continued from page 13

target group resides just across the street from Bobby Dodd Stadium.

"There are 35,000 students at Georgia State. They don't have a football team. Some of them would like to see college football. They don't have to travel outside of metro Atlanta to see college football; they can come right here," Griffin said.

Another difficulty that Tech has to overcome in any marketing campaign is financial reality. An unlimited budget is far from reality, so Tech has to find other, more creative ways to finance the campaign.

"We don't have the resources of Coca-Cola, Delta or Home Depot that can just saturate the marketplace with paid advertising, so we've worked out partnerships and relationships with media companies such as the *AJC*," Griffin said.

The *Atlanta Journal-Constitution* is a sponsor of the pre-game festival area, providing over a quarter of a million dollars of services to help create a better setting.

In another promotion, the *AJC* provided 300,000 complimentary papers to Tech for delivery around Atlanta.

The wraps for this complimentary edition, supplied by Tech, encourage readers to "come see the team in your own backyard." It also provided a football schedule for the Jackets and detailed several ticket packages that are available for "Georgia Tech Football, a great way to spend a Saturday."

Another example of the marketing campaign can be seen in the phone book. In a partnership with Verizon, Tech has 20 pages of advertisement for its athletics under "Georgia" in the Yellow Pages.

Verizon did neglect to use the school's official title, but the misnomer of "Georgia Tech University" is easy to forgive when looking through the colorful pages. The section begins with advertising for football, but includes several other sports at the Institute.

> "There are 35,000 students at Georgia State. They don't have a football team."
>
> **Paul Griffin**
> Associate athletic director

"[Nearly] every sport is represented within that 20-page section to help introduce the newcomers to Georgia Tech athletics," Griffin said.

The marketing campaign is representing all sports, but the sport with the most to gain from financially is certainly football.

"We need to create awareness about all of our sports and programs. From an economic perspective, in order to pay our bills and support our program financially, the greatest growth potential we have is football," Griffin said.

Packing the stadium also helps Tech when it comes to recruiting new athletes. Filling the bleachers with enthusiastic fans leads to a self-perpetuating cycle of success that is already in place at schools such as Miami, Florida State and Ohio State.

"Kids want to go play at places that seem like they are fun, competitive and exciting places to go. The better players would like to go there and do go there. The team's better and the stadium's more full and colorful, and it's a cycle," Griffin said.

The results stemming from a successful marketing campaign extend far beyond the student-athletes on campus. The school itself becomes more attractive to prospective students and current students are able to enjoy the team's success.

"I think [a successful athletics program] also helps the Institute provide a well-rounded extracurricular activity for its non-athletic students," Griffin said.

Griffin said it is important to note that Tech is being marketed as Atlanta's team in addition to being the team of current students and alumni of the Institute, not as a replacement.

The new campaign is a simple result of supply and demand. "From what I understand, there are only 34,000 living graduates in the Atlanta metro area, so they wouldn't fill the stadium even if they all came," Griffin said.

As evidenced by the support from last year's Final Four run, if Tech sports can supply success, demand from Atlanta's residents to be considered supporters of the school will follow.

# What's behind the biomedical engineering boom?

By Kimberly Rieck
*Opinions Editor*

This past May, 19 students graduated from Tech with the first-ever undergraduate degrees in biomedical engineering.

Now fast forward a few months to a time when biomedical engineering has become among the most popular declared engineering majors among freshmen, with almost 200 first-year students in the department.

The undergraduate program was approved by the Board of Regents in spring 2001, and its first students began their studies in fall 2001. The undergraduate program is unique because of its focus on the sciences and engineering.

"Our undergraduate program is focused on trying to create an environment for the students where the life sciences and engineering is integrated throughout the entire program. It's not a situation where students take some biology courses and engineering courses and suddenly becomes a biomedical engineer," said Paul Benkeser, associate chair for undergraduate studies and an associate professor in the Department of Biomedical Engineering.

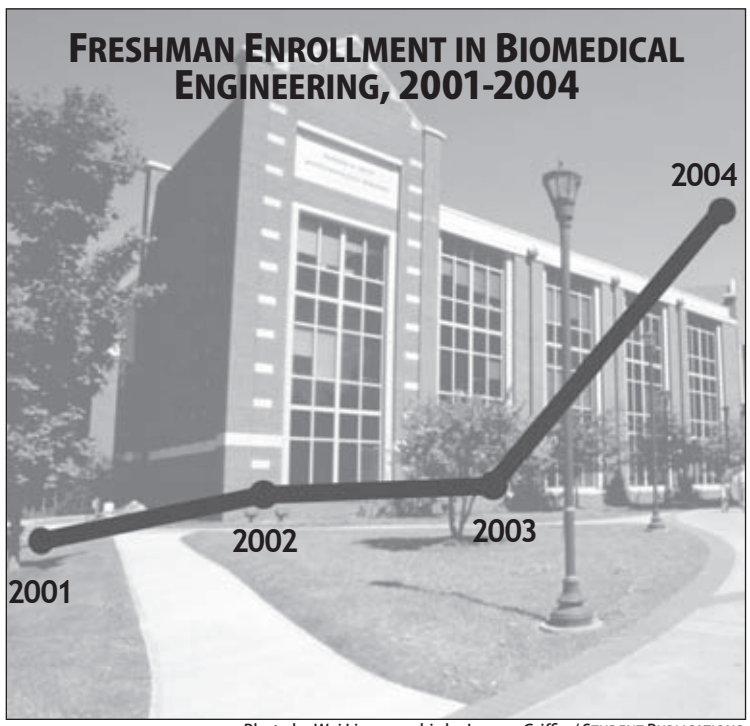


Photo by Wei Liao, graphic by Lauren Griffin / STUDENT PUBLICATIONS

**This fall marks the first time students can major in biomedical engineering as entering freshman. This, coupled with increased interest in biotech fields, has resulted in a drastic increase in freshman enrollment since the program began in 2001.**

"We really are trying to teach the students to speak two different types of languages—those that [are] common in the field of sciences and those that are common in engineering circles," Benkeser said.

"It really is a challenge there because scientists and engineers don't think alike, and they don't approach problem-solving in the same way. It really is quite a challenge for our students to gain that kind of perspective of both fields in a four-year undergraduate program," he said.

Before this fall semester, Tech had a capped enrollment policy for biomedical engineering (BMED) students, where students had to have attended Tech for at least a semester before they were able to change their major to BMED. Tech's graduate admissions program is also highly selective, as it is the No. 2 biomedical engineering program in the nation, according to *U.S. News and World Report*.

"[The cap] was instituted to give the department a chance to grow in size in terms of the number of faculty, as well as to give the building a chance to be constructed and built to handle the numbers of students that we were expecting for our undergraduate majors. Once the faculty size grew and the [U.A. Whitaker Building] was constructed, the enrollment cap was removed," he said.

While under the capped enrollment policy, 152 students applied to the program. Benkeser said the majority of the students who applied in fall 2003 were first-time freshmen but a significant number were upperclassmen. "We accepted about 127 of those 152," Benkeser said.

Despite the steady influx of students to the major since the program was added to Tech's curriculum in Fall 2001, this fall's enrollment figures surprised the department. The department welcomed 204 freshmen, 19 transfer students, and approximately 30 to 40 students who changed their major to biomedical engineering.

> "We had expected to see something along the order of 125 to 150 students, not 200."
>
> **Paul Benkeser**
> Associate professor

"We had expected to see something along the order of 125 to 150 students, not 200," Benkeser said.

### Premeds: beware?

The increase may be due in part to a slight misconception on the part of incoming freshmen, however, that biomedical engineering is an ideal major for students on the premed route. According to a survey at FASET, almost half of the BMED freshmen indicated that they plan on attending medical school after college.

"I think there is a misconception that biomedical engineering as a major will be an advantage in the medical school admissions process," Benkeser said. According to him, there is no statistical evidence to support this.

In addition, biomedical engineering requires significantly more credit hours than traditional premed majors such as biology or chemistry. A premed BMED major would have to take 139 semester hours to fulfill both the major and premed requirements, while a biology major would only have to complete 120 semester hours.

Augustin Luna, a senior BMED major and President of Tech's Biomedical Engineering Society, also emphasized that a biomedical engineering degree is not the ideal route for premeds.

"People have to understand that this is not the perfect major for premeds," Luna said. "A lot of students come into the major thinking that this is the only major with the word medical in it, but I guess they're maybe finding out that when they get into the second biomed class... it's very quantitative and includes calculus."

However, Luna said, "If you can handle the engineering and math aspect, I think this is a fabulous place to be for a premed."

### Post-undergrad options

Students with a B.S. in biomedical engineering go on to medical school, as well as graduate programs in biomedical engineering and bio-

See **Bio Boom**, page 21

# Tech Up Close

**CAN YOU FIGURE OUT WHERE ON CAMPUS THIS PICTURE WAS TAKEN?**

Email **focus@technique.gatech.edu** for a chance to win a free student combo at Lil' Dinos.

**THIS WEEK'S PHOTO:**

By Jon Drews / STUDENT PUBLICATIONS

Last week's Tech Up Close:
Mural in IBB building

Last week's winner:
Brian Nguyen

## CAMPUS RESEARCH REVIEW

# Nanotechnology may deliver gentler chemotherapy

By Kristin Noell
*Senior Staff Writer*

Cancer has found a new enemy in Dr. Andrew Lyon, an associate professor in the School of Chemistry and Biochemistry. Lyon and his research team are developing a way to use nanotechnology to improve chemotherapy delivery.

Current methodologies for chemotherapy involve drugs that target rapidly dividing cells, such as tumors. In many cases, however, normal tissue can often be destroyed along with the diseased tissue.

The key to avoiding this collateral damage, according to Lyon's research, is the use of nanogels, which are nanoparticles made from hydrogel-type materials—or, as Lyon puts it, "spongy networks of polymer that are filled with water."

In collaboration with a team at Purdue University headed by Professor Jean Chmielewski, Lyon and his team of two graduate students have demonstrated that these nanoparticles are very specific in their targeting.

The secret to the targeting lies in the art of deception: Lyon's group has essentially found a way to trick cancerous cells into ingesting anti-tumor agents.

Because cancer cells have more receptors for folic acid than healthy cells, the researchers covered the surface of the nanogels with folic acid. By "disguising" the particles in this way, they were able to fool cancer cells into absorbing the particles, and hidden within are deadly drugs that can kill the cell.

"You can encapsulate the drug inside of a carrier and use kind of a Trojan Horse-type approach," Lyon said.

This approach allows for more efficient targeting, which in turn leads to more appropriate dosage levels when treating cancer.

With current chemotherapy, when a treatment is associated with extensive side effects, a non-optimal lower dosage may be required. The new treatment developed by Lyon's team could potentially allow the administration of perfect doses.

There may be other advantages as well.

"Sometimes tumors display what's called 'multi-drug resistance,' where they no longer shrink or respond to a particular anti-tumor agent," Lyon said. In these cases, drug delivery would be paused after a period of time in order to prevent the tumor from becoming resistant.

Nanogels, however, do not have this drawback. "It also may allow you to use combination therapies that right now can't be used for a long period of time," Lyon said.

Lyon has been interested in the idea of target drug delivery for a long time, spending his first four and a half years at Tech doing standard polymer research to understand the details of synthesizing the hydrogel nanoparticles.

Once his group understood how to synthesize a variety of complex materials, they started thinking about where they could apply that knowledge. The field of cancer treatment emerged as an obvious application.

By Stephanie Lin / STUDENT PUBLICATIONS

**Andrew Lyon, an associate professor in the School of Chemistry and Biochemistry, is experimenting with nanogels as a method of delivering chemotherapy more effectively and less harmfully.**

> "It may not be the biggest...thing the group has done... but it definitely hits home the hardest."
>
> **Andrew Lyon**
> Associate professor

After developing the particles, Lyon sent them to Purdue, where the other half of the team tested them, yielding promising results that showed cancer cells were indeed taking in the nanogels.

Now they are loading those particles with real anti-tumor agents used in normal chemotherapy.

"Once we understand what range of [cancer] cells this might work on, and once we've shown that we can do targeted delivery of something that's really a therapeutic agent, the next step is to design the materials so that they can be injected," Lyon said.

One obstacle the team faces is the reaction from the body's immune system. Therefore, chemical modification must be made on the nanogels in order to make them suitable for intravenous delivery.

The next step would be testing them on animal models with human tumors.

Lyon's research will potentially have applications in other medical fields as well.

"What we're working on right now is fairly specialized, but there are certainly lots of other arenas that can benefit from encapsulation of a therapeutic agent and also delivery of that agent to a specific site," Lyon said. Such arenas include certain arthritic conditions, for example.

Broadening the scope of his research is something Lyon is also interested in.

"One of my main goals right now is to try to develop synthetic materials that...carry on a dialogue with a biological system," Lyon said.

"There's lots of things right now that you can...inject into your body that tell a cell to grow a certain way, or kill a cell a particular way," he said. "Then maybe that event will change something about the material, but very often that's where the conversation stops."

Lyon said he hopes to develop multi-functional, multi-responsive materials that carry on a more "complex, deeper dialogue in biology."

He feels that this particular project, however, is probably the most important to the average person.

"This is without a doubt the research project that we've worked on that has most directly addressed something that the layperson cares about," Lyon said. "We've all been affected by cancer...We all know people who've been affected by it, so I think it may not be the biggest or most wonderful thing the group has done...but it definitely hits home the hardest."

Lyon and his team are optimistic about the future of their nanogels. "If we continue having the kinds of success we've had up until now, this is going to consume a long period of time," he said.

Their optimism, along with positive research results, means a brighter future for cancer patients and cancer research.

## SLIVER

**www.nique.net/sliver**

Show some pride... tear down the 'coming out' flyers in you dorm.. uggggh
I did... ON PURPOSE
Rich, you can't joke about that for a month!!!
'Dancing in the moonlight' blaring down the dorm halls... who needs that heavy metal junk?
I do believe these are bottomless
Finlay, the F-Bomb is your friend
save it for next week? why?
You know better, "wishing" for Ivan to cancel Tech classes. And even if we had a direct hit, Tech would just relocate classes in the remaining standing buildings...
Young conservatives, have you thought about preparing for the re-institution of the Draft when you elect Georgy to four more years?
Doesn't look like Jean's coming this way either.
i want to have jude law's babies
That storm was fun to watch. I never thought I would be in a hurricane up here rather than in Savannah which continues to be spared so far. Stay away Jeanne.
That Clemson game rocked! Hopefully we won't have to win that close again but it was awesome to watch.
Whoa, I found a sliver with my name in it! Even though it's not about me, I hung it up anyways...
Yeah... YEAH... yeah... okaaaaaaaaaaaaaate!!!
MiSaSiM
can't we all just get along?
Andy, you need to stop overreacting.
Hooray for friends that leave you out of their friday night plans!

See page 19 for more Slivers!

FACES AT GEORGIA TECH

# Cuba's oppression no match for Martin's ambition

By Patricia Breed
*Contributing Writer*

Ana Martin escaped to the United States from a Communist country, taught herself the English language, and is now a graduate student in Tech's Civil Engineering department.

Martin holds an undergraduate degree in Architecture, which she received while still living with her family in Cuba. She was able to choose this educational path because of the excellent grades she received prior to her undergraduate studies.

Along with her thirst for knowledge, Martin also sees herself as "a very goal-oriented person."

"Even with the support of my family in Cuba there is not much that you can personally achieve," Martin said. "I wanted to live in the United States because this is a place of opportunity."

A main difference Martin cites between the educational opportunities in both countries is "the access you have to information. In Cuba some people have the idea that doctors and those type of professionals are fantastic because this is what [Fidel] Castro says, but how in the world can you be fantastic if the information, the books, and the access to the internet is very restricted and controlled by the government?"

According to Martin, since the government controls the flow of information to the public, the Cuban media is forced to portray a negative view of the United States.

"They always present an America where people live in plenty of fear, that this is a country where you cannot walk on the streets because it is not safe, where basically everyone has a gun, the level of violence of very huge, and where the opportunities are restricted," Martin said.

However, Martin did not let the media influence her opinion of the opportunities available in the United States.

She also had the advantage of inside information from her father, who was able to spend time studying Civil Engineering at Tech during the late 1950s. His time in the U.S. gave him a firsthand understanding of the personal growth potential in this country.

> "[The Cuban media] always present[s] an America where people live in plenty of fear...where basically everyone has a gun."
>
> **Ana Martin**
> Civil Engineering grad

"[Ever] since I was twelve I just wanted to leave, and some relatives that I have in Miami helped me to escape. They sent a yacht and I came on July 9, 2000, I crossed the sea over to Miami to get out of the dictatorship," Martin said.

Martin then lived in Miami for eight months under Cuban refugee status. She later moved to Puerto Rico in 2001 after receiving a job offer.

Once adjusted to the lifestyle of a new country, she decided to apply to graduate school at Tech. She was accepted and began classes here in Atlanta during the fall of 2003.

After being in the United States for four years, Martin finally received her permanent residency card last month. She is now free to travel, and will receive her U.S. citizenship within the next nine months.

Martin will be graduating this December from the Civil Engineering master's program with a specialization in soils. She is ready for "another adventure now, to get out of Georgia tech, and enroll in the real life in this country."

While preparing to start her "real life," Martin has begun the process of interviewing for jobs. She was surprised at how many unsolicited companies emailed her about positions open in her field, and considers herself "spoiled with choices."

"On of the most amazing experience I have had here, now that I am getting interviews for my job, is that everybody asks you what do you want to do with your life, like what are your expectations, what are your dreams," she said. "I am not used to those kinds of questions."

This is in contrast to her life in Cuba. When she was working as an architect, she also attempted to run her own bed-and-breakfast for tourists.

However, she was detained by the Cuban government three times for this entrepreneurial activity. They told her, "You are an architect. You are suppose to work for the government, and there is no way that you can do anything else."

Reagan Fountain, a fifth-year Civil Engineering major, befriended Ana over a year ago through contact in the Civil Engineering department.

"Her personality is riveting," Fountain said, "you see her and she is smiling, so you want to smile and say hello too. She tends to meet everyone that comes by because she is happy and it makes other people happy."

By Michael Skinner / STUDENT PUBLICATIONS

**Ana Martin escaped from her homeland of Cuba in July 2000. Despite having to teach herself English, she applied for graduate school in Civil Engineering and considers both Tech and the U.S. her home.**

"[Ana] approaches people and situations with the freedom to be bold...[she is] a person who doesn't let circumstance ever fetter her dreams, she is a person who not only dreams big but takes decisive steps to make it happen," Fountain said.

Continuing her education at Tech was not the reason Ana decided to escape from Cuba. However, now she is in "love with this school just as much as [she is] in love with this country," Martin said.

## SLIVER
**www.nique.net/sliver**

Red Stripe... It's beer! HOORAY BEER!
Dammit. Why can't I drink clear liquor? It's easier to sneak onto boats than whiskey. However, Arizona diet iced tea is a perfect match for Crown. Heh heh.
Thanks for the great year, baby...here's to many more!
My apartment flooded Thursday night and our sketchy landlords won't fix anything!
friday nights on college campuses are supposed to be cool
some drunk girl said i look hot in my buba gump shirt
SORRY TOM FOR BRAKING YOUR HAIR DRYER, NOW FEED ME!!1
hmm
compromise. compromise. compromise. compromise.
man cannot survive as an island.
So management majors tell Engineers what to do...and make less money? Good call there
Single girls are at Tech? I have seen one single girl here at Tech and she is crazier than me
Hooray for whoever didn't close the school during the hurricane, I still had homework due at 6 v.v
Inuyasha is no more, mourn him with pride that over half the episodes were disgusting filler
Reno 911 is a great show
Did you know that pencils burn with very little heatage?
Are the editors of the technique truly willing to whore out the GT name to Playboy advertisements?
Q: Where can I find some natural selection?
A: Natural selection can be found in Colorado frat houses, Billy!
Tech loses to UNC-- what a show!
Those Mormons...they love the option
Those swarmin' Mormons...
A sliver virgin no more!
you have serious stoichs. problems problems problems.

See page 24 for more Slivers!

# Students with families affected by hurricane have mixed reactions

## Hurricane
Continued from page 13

storm provided little relief.

"That definitely made me pause for a bit to see my hometown being hit like that," Zick said. "It was exciting and scary at the same time to think about this storm of possible destruction hitting your home."

"It was rather frightening, because there was no clear indication that the storm was going to be 'only' Class I when it reached Orlando," Benson said, who was home during Charley.

Some of the hurricanes did unexpectedly weaken, which provided comfort for some students, although nobody was able to breathe easily again until the storms had passed.

"I felt relieved after the storm weakened significantly before landfall," said Matthew Widlansky, a third year Earth and Atmospheric Sciences major. Charley affected his home of Riviera Beach, Florida so severely that his family was under mandatory evacuation.

"It didn't do the catastrophic damage originally thought possible," Widlansky said.

In fact, none of the students interviewed reported any casualties, although there were damages ranging from week-long power outages to flooding to collapsed buildings.

"One of the elementary schools was completely destroyed [by Charley]," Dodge said. "They're having school in a church right now."

Another common problem was debris from trees that littered the neighborhoods and, in many cases, blocked roadways as far north as Atlanta.

For Dodge, cleaning up the debris required a collaborative effort by the whole community.

"We had a neighborhood chainsaw party because...you have to cut [the tree limbs] up so they'll take them away. So that was sort of our... neighborhood bonding experience," she laughed.

"I worked in Melbourne, hardest hit by Frances, so I knew a great deal of co-workers [there]," Benson said. "Many lost large portions of their homes, and a great deal of landscaping and trees were lost. I felt extremely remorseful for their losses but was relieved and nearly elated that no one was physically hurt."

Jamaica also received considerable damage from Ivan, according to Fong, including extended power loss and country-wide flooding.

However, despite the intensity of the storms and their consequences, hurricanes are a fact of life for students from this part of the world.

"I think that people who live in hurricane-prone areas understand the risk and wouldn't be living there if they weren't prepared to deal with it," Widlansky said.

**The Caribbean Student Association (cyberbuzz.gatech.edu/caribsa) is sponsoring a drive to collect supplies for hurricane victims.Donations for Florida victims can be made through www.flahurricanefund.org.**

# Bio Boom
from page 16

engineering.

There are also a range of jobs available, especially in the growing biotech field. Job descriptions include designing prosthetic limbs, developing computer systems to monitor patients during surgery, and designing artificial materials for implants.

Georgia, especially the Atlanta area, has made a name for itself nationally in the growing biotech market.

According to Ernst & Young, Georgia ranks eighth in the country in the number of biotech companies, with metro Atlanta supporting more than 75 percent of the state's biosciences economy.

Over 20,000 employees work in the bioscience field in over 200 Atlanta companies and at Tech and Emory, according to **Atlantabioscience.com**. The state of Georgia itself has invested over 400 million to the Georgia Cancer Coalition.

In addition, the Georgia Research Alliance, a public/private partnership, has spent over $350 million to recruit scholars to the state and to help create and staff new biotech research centers.

"I chose biomed because I felt it was the undergraduate degree that would give me the most options once I graduated," said Katy Lyall, a fourth-year Biomedical Engineering major and a member of the Biomedical Engineering Student Advisory Board.

The Student Advisory Board, along with other biomedical engineering student organizations, are working hard to get the word out about the major to not only Atlanta's companies but also to other departments on campus.

"One of the things that we're facing with it being such a new field is that industry doesn't know what biomedical engineers do," Luna said. "They know what ChemE or EE does because those fields have been around for a while...people are like 'I'm going to hire a ChemE because I know what he does and what he doesn't know, I can teach him,'" Luna said.

Luna and the Advisory Board

> "I think there is a misconception that biomedical engineering...will be an advantage in the medical school admissions process."
>
> **Paul Benkeser**
> Associate professor

are trying to change employers' mindsets. "It's not only trying to get people from industry to come here...it's also about...trying to teach them that we can do all these cool things and we have such a diverse background that we would be an asset to your company."

While biomedical engineering may be a hot field right now, the major does have limitations. "Right now the interest in the field of biomedical engineering by students coming in is not in sync with the job opportunities that are there when they graduate," Benkeser said.

In addition, biomedical engineering is a much more specialized major than other popular engineering majors like mechanical or electrical engineering.

"It does concern us about whether or not we're doing a good job making students aware of this situation," Benkeser said. "Biomedical engineering is not the only major that will allow students to get into this field."

Many biotech companies employ a range of engineering specialists. Thus students interested in the biotech industry are encouraged to pursue their interest in the field in more ways than just majoring in biomedical engineering. Students in many majors have the option of pursuing a minor in BMED. The minor requires 18 hours of biomedical classes.

### Work in progress

On campus, BMED student organizations are working with faculty members to help improve the program.

"We communicate between the students and the faculty. We're basically there to provide input to the faculty about the changes that should be made to improve the program," Lyall said.

Luna noted, "One of the big things about this whole major is that its very flexible right now. Our teachers are usually younger than in other majors so they're more receptive to thinking in different ways and being flexible." Luna is also working to implement a word archive for the department, where students would have access to all past quizzes and tests for each class.

**For more information, visit www.bme.gatech.edu.**