

# GeorgiaTech



ALUMNI MAGAZINE

Fall 2007

Bill  
**GEORGE**  
on Finding  
True North

Chip  
**AKRIDGE**  
on Being  
the Best

Judith  
**CURRY**  
on Global  
Warming

**50**  
Years Since  
**Sputnik**



*"I hope each of us who 'got out' of Tech will invest our time, talent, and treasure to encourage the next Tech generation to be men and women of wisdom and influence...in their homes, communities, and workplaces."*



**B. Jane Skelton, IM 1977**

Atlanta, Georgia

- Atlanta native; 1974 graduate of Southwest DeKalb High School.
- Alpha Gamma Delta member; finance advisor for chapter, 1978-1998.
- Served as Alumni Trustee; Co-Chair of the Class of 1977 25th Reunion Fund Committee; currently on College of Management Advisory Board.
- Master of Professional Accountancy from Georgia State University; Certified Public Accountant.
- Almost 30 years in the banking industry in Atlanta, currently Chief Financial Officer of InfiCorp Holdings Inc. and subsidiaries.
- Actively involved in Buckhead Church in preschool ministry and community group.
- Short-term mission trip to Romania working on children's ministry.
- Board member of Art Within, non-profit art and media company developing scripts from a faith-based perspective.

**Gifts to Georgia Tech**

- Roll Call donor for 31 years.
- Multi-faceted support, including estate provision for the Alexander-Tharpe Fund.
- Gifts for the College of Management and bequest to establish scholarship fund.

**Thoughts on giving to Tech**

"I hope each of us who 'got out' of Tech will invest our time, talent, and treasure to encourage the next Tech generation to be men and women of wisdom and influence... in their homes, communities, and workplaces."

**Jane Skelton** joins Founders' Council's 942 members who have made bequests or life-income gifts of at least \$25,000 in support of Georgia Tech's future.

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Tech**



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**Being the Best**

Scouting taught Chip Akridge principles that he carried into business as badges of honor. In the tough world of real estate development in Washington, D.C., Akridge, ME 68, has proven that nice guys can finish first.

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**Missions  
Accomplished**  
**Cover Story**

Alumnus Douglas Wheelock looks ahead to his mission aboard the space shuttle Discovery. He is just one of thousands of Georgia Tech alumni and researchers who have made giant steps for humankind in space exploration since the launch of Sputnik 50 years ago.

Photo: Courtesy NASA



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**True North**

*The New York Times* hails Bill George's second best-seller as "one of the most important books on leadership to come along in years." In it, George, IE 64, advises business leaders to be guided through their professional and personal lives by an internal compass.

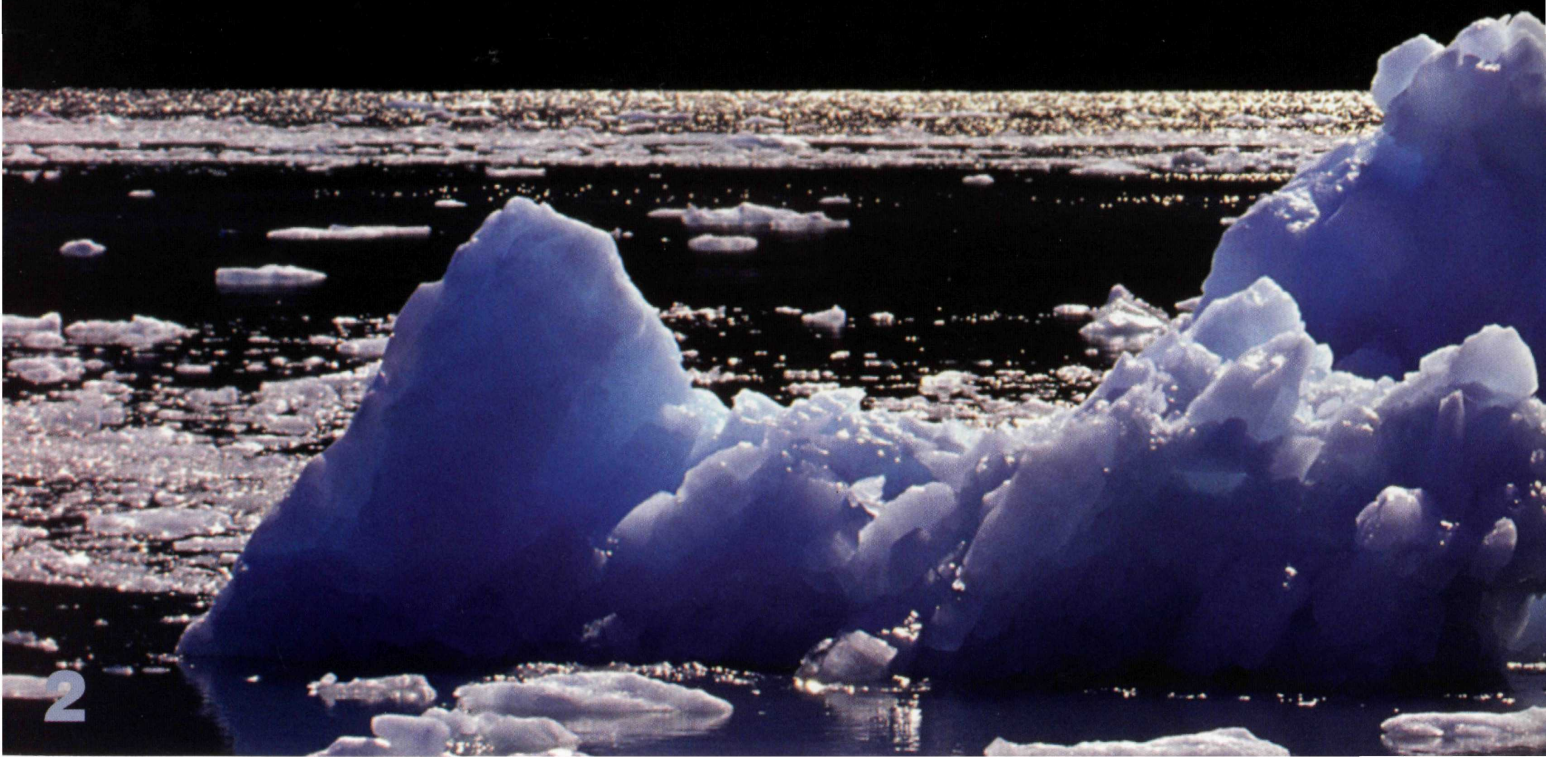
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**Judith Curry:**  
**Meteoric Rise**  
**Interview**

The chair of Georgia Tech's School of Earth and Atmospheric Sciences was thrust into the spotlight when a paper she co-authored was published just weeks after Hurricane Katrina devastated the Gulf Coast. Two years later, she remains in the eye of the global warming storm.

# GeorgiaTech

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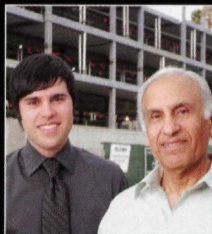
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Pinnacle

# Fall 2007 PREVIEW



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## Be a Good Sport

Over Labor Day weekend, the Alumni Association hosted the Wreck the Irish tour, a three-day excursion to Chicago and the mecca of college football: South Bend, Ind., to support the Yellow Jackets in the gridiron contest against the Fighting Irish of Notre Dame. Almost 600 of our fellow alumni, friends and families joined us for one of those rare trips in which almost everything went according to plan: warm, sunny weather, great food and relaxation at great venues (the House of Blues, the College Football Hall of Fame, downtown Chicago, the Westin River North) and a football game of extraordinary note — in short, a splendid way to spend the holiday weekend.

Our coaches, our football team and our fans played their roles perfectly. In my experience and those who traveled with us, so did the Notre Dame fans. And that's the point of this column. Everywhere we went on campus, we were welcomed by gracious Notre Dame fans. They obviously take great pride in their campus and the heritage of Notre Dame and they showed true sportsmanship both before and after the game. The American Heritage Dictionary defines sportsmanship as "conduct and attitude considered as befitting participants in sports, especially fair play, courtesy, striving spirit and grace in losing." Sounds kind of quaint but it's much more important today than ever before.

Lots of fans from other teams are traveling to Bobby Dodd Stadium at historic Grant Field this season. These home football games are opportunities to show great sportsmanship, which will reflect positively on Georgia Tech's reputation for years to come. I know it's not easy because a lot of us (including me) get entirely too wrapped up in the winning and losing. So step back, take a deep breath and be nice! Wouldn't you rather those opposing fans think of you and your alma mater in the same positive way that you view yourself?

Joseph P. Irwin, President





## Off the Chart

Over the years, I have often commented most favorably on the publications that seem to endlessly stream out of the Alumni House. The Summer ALUMNI MAGAZINE is off the chart! The real estate development theme is incredibly exciting. You do us proud at every stroke of the pen and turn of the page.

I often drive up and down Peachtree and around our campus to observe the progress of various projects under construction. So much of Atlanta's development can be attributed to Georgia Tech alums — Portman, Borders, Brown, Bolton, Heery, LeCraw, King, to name a few.

Further, I know we all are eager to further develop Tech Square. With the demolition of the "dialysis building," we will open up a wonderful opportunity for further improving the landscape on the east side of campus. I visit with Novare often in the Biltmore and enjoy a bird's eye view of the square from its conference room and down Fifth to the Klaus Building.

Truly confessing, I routinely visit the bookstore and Starbucks just to hang out and



marvel at what the Georgia Tech Foundation and Wayne Clough have done.

Carey Brown, IE 69  
Atlanta

## Portman Is Exceptional

That was a great article about John Portman in the Summer ALUMNI MAGAZINE. Portman is exceptional. He is one of those guys who has no limit to what he can accomplish, because he believes anything is possible.

The Class of 1950 was an exceptional group of guys. I didn't know a single architectural student who had not served in World War II. Many worked for other architects while at Tech as Portman did. I assume, having attended the Naval Academy, he too got a little help from the GI Bill.

Jim Warner, Arch 50  
Atlanta

*Jim Warner is a retired commander in the Naval Reserve and was a naval aviator in World War II and the Korean War.*

## High-flying Jackets

I read with great interest your article "From the Ground Up" (Summer ALUMNI MAGAZINE) about ImagineAir. Ben Hamilton, Aaron Sohacki and Frank Park are some of the latest members of the Yellow Jacket Flying Club to found successful entrepreneurial aviation companies and I wish them well in their endeavor.

Like Ben, Aaron and Frank,

all of our members have a passion for flying and, since we began in 1946, dozens have gone on to fly for Delta, American, United, Piedmont and Eastern — as well as other airlines. Numerous others have served as test pilots and military aviators in the armed forces.

The Yellow Jacket Flying Club is open to all members of the Georgia Tech community — alumni, students, faculty and staff — and their immediate relatives. We are by far the cheapest place in metro Atlanta to learn to fly. We currently have four Cessna 172s in our fleet based at Fulton County Airport. Come fly with us!

Jud Ready, MatE 94,  
MS ME 97, PhD MSE 00  
Yellow Jacket Flying Club  
faculty adviser

## Fan Mail from Movie Star

I loved, loved the article about me in the Spring 2007 GEORGIA TECH ALUMNI MAGAZINE. "Where in the World is Tammy Fulwider?" was amazing. I'm late letting you know because I was in North Carolina shooting a lead for a film with Mickey Rooney. I was working constantly on this shoot and barely had time to come up for air. That was in May.

The magazine got to Los Angeles and my husband sent it to me sometime in May. But I went right from that film to the lead in the science fiction film "Eyeborgs." We shot until the middle of July.

The next day, I drove to Florida to begin the second season [as writer, producer and host] of "Animal Attractions" for television. I am finally catching up, and I love the article. I hope your readers enjoyed it.

Megan Blake, Psy 81  
Malibu, Calif.

*Tammy Fulwider, a former Miss*

*Georgia, has pursued an entertainment career as Megan Blake. She has appeared in more than 25 films and 20 television series.*

## Make Mama Proud

The success I have enjoyed in my professional and personal life would not have been possible if it were not for the well-rounded education I received at Tech.

Georgia Tech has a well-deserved reputation as one of the finest engineering schools in the country, but Tech graduates have much more to offer to society than mere scientific literacy. This is because we were taught to respect the nontechnical, business and legal phases of engineering and the importance of good, clear writing. We were also told to be prepared to deal with people and their ways with the same measure of diligence and respect given to scientific

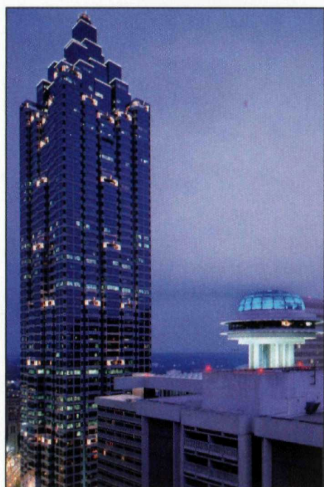


## We Welcome Mail

The ALUMNI MAGAZINE welcomes letters. Please include your full name, address and telephone number. Letters may be edited for clarity, space and content.

*Mail/e-mail to:*

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*John Portman's architecture has helped shape the Atlanta skyline.*



laws relating to inanimate objects and their forces.

The nontechnical focus at Tech back in the 1950s was aimed at helping us become self-confident by developing a strong character founded upon honesty, integrity, courtesy, humility and a strong work ethic — and don't forget, a sense of humor.

Our beloved George C. Griffin, dean of students, and Fred Ajax, director of the placement office, heartily subscribed to these principles and preached them to us. The last bit of advice that Ajax gave to my 1955 mechanical engineering class was all about honesty, personal character traits and self-confidence. It went something like this:

"Now go forward into the industrial world, knowing you came from the finest school in the country, in the finest country in the world and remember, wherever you go, you will be taking a part of Georgia Tech with you. So conduct yourself with pride and honesty — leave the lying and cheating to the fancy Eastern schools."

This was received with a burst of laughter and applause. Ajax continued in his inimitable folksy style by saying, "The road to success is not very complicated. Just go out and do something to make your mama proud, because when you make mama proud, we here at Georgia Tech will also be proud."

I have never forgotten this well-placed advice. This same sense of values is the cornerstone of my company's code of ethics, along with a strong sense of humor that is so important when the going gets tough.

Bob Babington, ME 55  
McLean, Va.

*One hundred years ago, in 1908,*

the first edition of the Blueprint appeared, the Anak Society was founded, the Georgia Tech band was formed and enthusiastically embraced the "Ramblin' Wreck" fight song, and Fulton County granted an ambitious group of persistent alumni a charter to launch the **Georgia Tech Alumni Association**.

It has been a centennial journey accompanied by such legendary personalities as Dean George Griffin, coach Bobby Dodd, drownproofing champion Freddy Lanoue, golfing great Bobby Jones and Mayor Ivan Allen.

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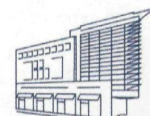
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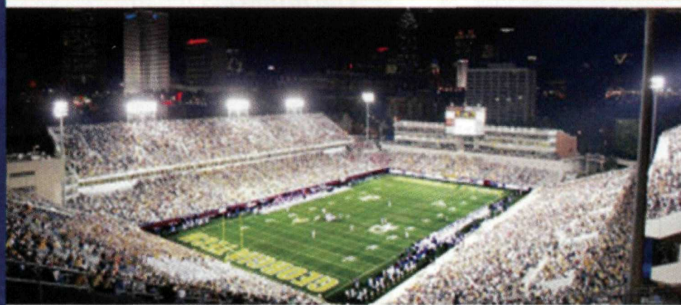
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**If you miss the bus, well, the next bus is three years later.**

— **Craig Mundie**, EE 71, MS ICS 72  
Microsoft's chief research and strategy officer,  
on bringing new technologies to market,  
in *The Wall Street Journal*

“

Students working on this house have pushed the limits of residential technologies in all avenues ranging from solar technologies, architectural materials, engineering systems, lighting and automation techniques.

— **Ruchi Choudhary**  
assistant professor in the College  
of Architecture, about Tech's  
entry in the Solar Decathlon,  
in MSN Money online

“

**The walls are low here.**

— **Nathan Bennett**  
associate dean in the College of Management,  
about collaboration between science and business students,  
on CNNMoney.com

“

My belief is that robotic soldiers won't look like humanoids, but they will be capable of being more humane than some soldiers are. First, if they saw an unethical action about to take place, they would warn the soldiers that what they were about to do violated the rules of engagement. Second, they would be able to report it. And third, knowing that an agent is

watching you may make a soldier have second thoughts about committing such atrocities.

— **Ron Arkin**  
Regents professor in the College of Computing, in *The Sunday Paper*

“

*The problems we are facing with global climate change are not well understood. There is a diversity of ideas out there, it is not just one political party's issue.*

— **Terry Maple**  
professor of psychology at Georgia Tech, discussing green conservatism and promoting a new book, “A Contract with the Earth,” on which he collaborated with Newt Gingrich, former speaker of the House, available in October, in *Iowa State Daily*

“




I said, ‘Guys, there are only two things that are important to me: Win and don't cheat.’ You can do that here.

— **Dan Radakovich**  
Georgia Tech Athletics director, about a meeting with his coaches, in the *Atlanta Journal-Constitution*

“

**When I was a boy in Georgia, college sports was [Georgia Tech coach] Bobby Dodd vs. [Alabama coach] Bear Bryant immemorial. Compared to that, the Harvard-Yale game is a panel discussion.**

— **Roy Blount Jr.**  
a native of Decatur, Ga., now living in  
Massachusetts, in *The Wall Street Journal*



**You're talking about moving gigabits in seconds, your whole iPod library, your whole video library. This has the potential of becoming the de facto way of moving this information on and off the devices. With this type of technology, you can compete — and pretty much crush — the wired competition.**

— **Joy Laskar**  
professor of electrical and computer engineering at Georgia Tech, concerning ongoing research to use extremely high radio frequencies for transferring huge data files over short distances, in *USA Today*

Photos: Left, Gary Meek; right, Courtesy of Habitat for Humanity

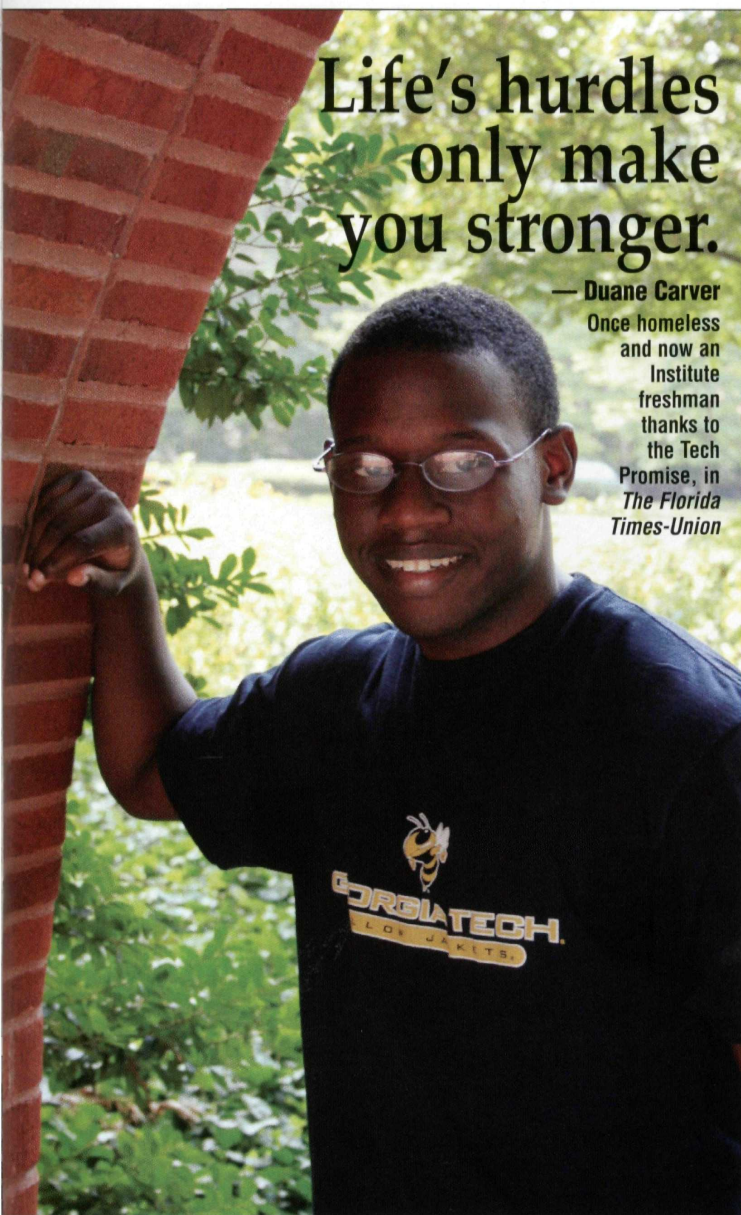




# Life's hurdles only make you stronger.

— Duane Carver

Once homeless  
and now an  
Institute  
freshman  
thanks to  
the Tech  
Promise, in  
*The Florida  
Times-Union*

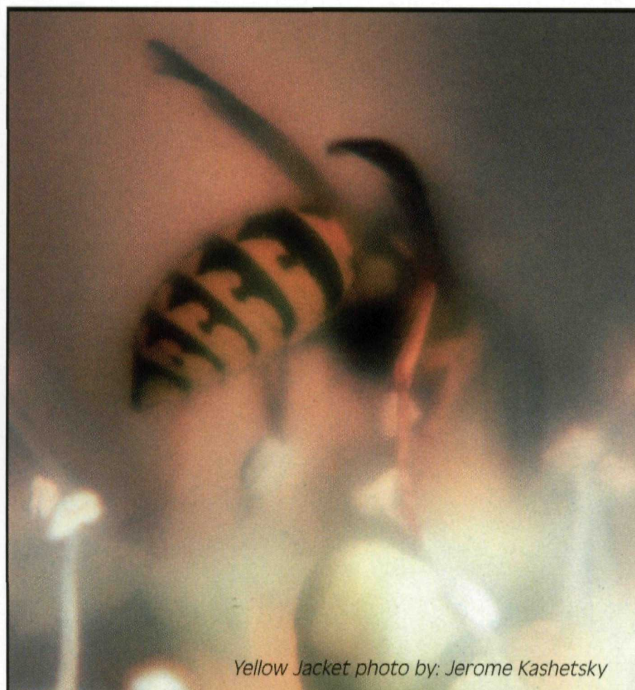
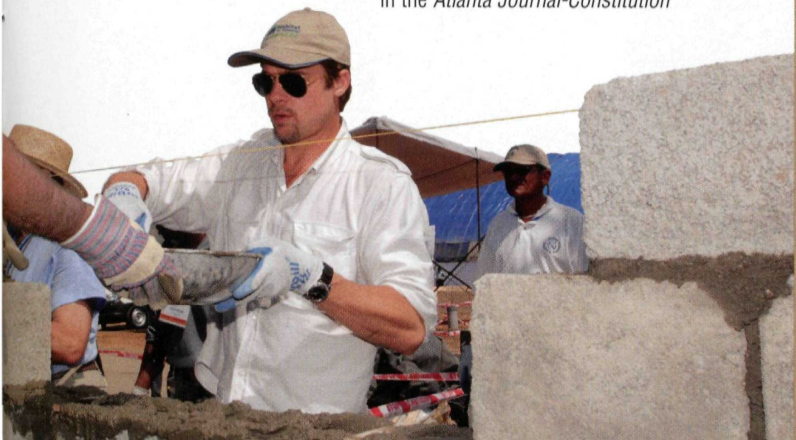


“

## We finished in four days, because Brad Pitt showed up.

— Jimmy Carter, Cls 46

commenting on a Habitat for Humanity project to build  
100 homes in Mumbai that suddenly attracted a lot of volunteers,  
in the *Atlanta Journal-Constitution*



*Yellow Jacket photo by: Jerome Kashetsky*

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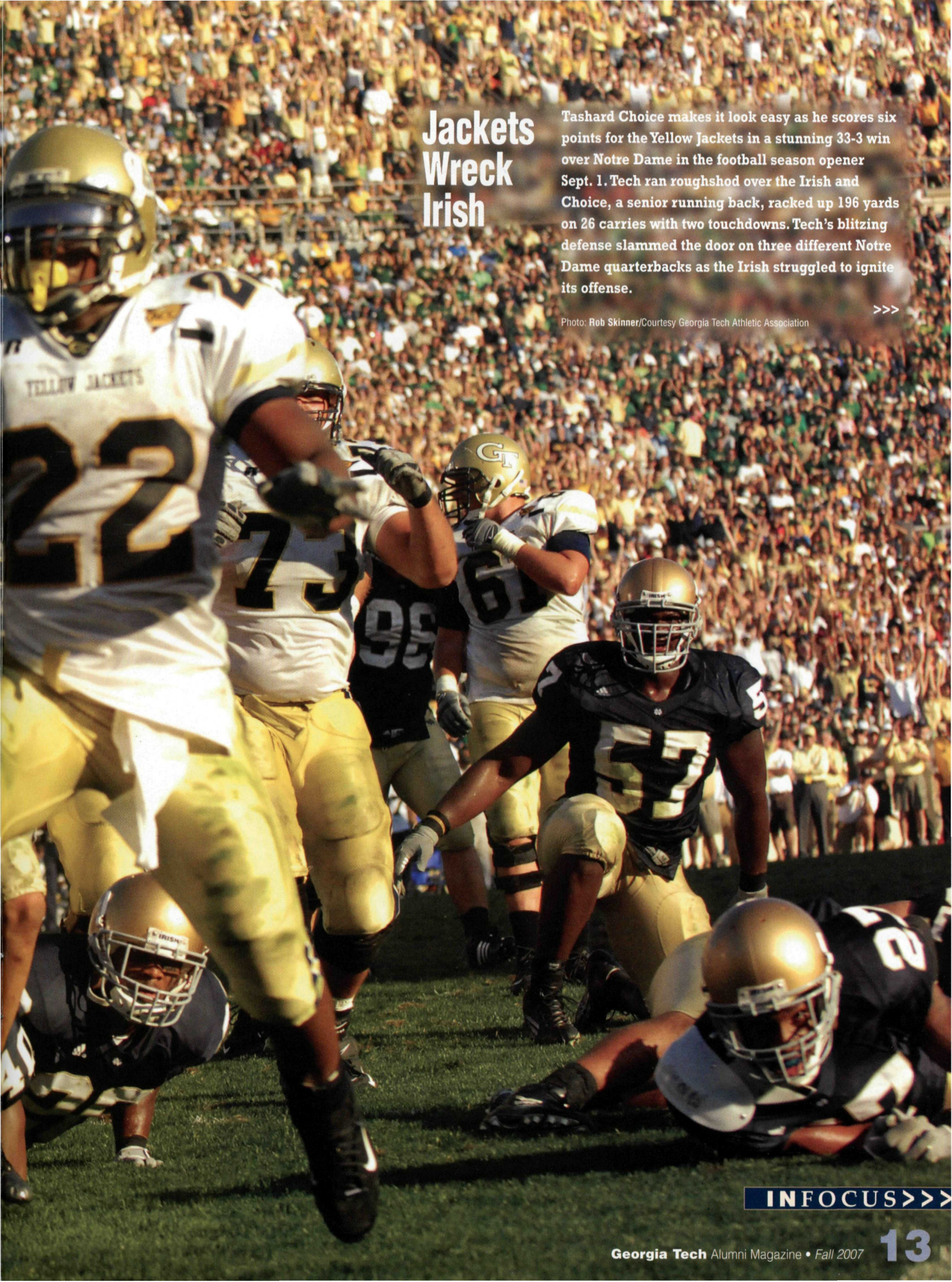
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## Jackets Wreck Irish

Tashard Choice makes it look easy as he scores six points for the Yellow Jackets in a stunning 33-3 win over Notre Dame in the football season opener Sept. 1. Tech ran roughshod over the Irish and Choice, a senior running back, racked up 196 yards on 26 carries with two touchdowns. Tech's blitzing defense slammed the door on three different Notre Dame quarterbacks as the Irish struggled to ignite its offense.

>>>

Photo: Rob Skinner/Courtesy Georgia Tech Athletic Association

INFOCUS>>>



## Invasion of the Tiny Crabs

Researcher Amanda Hollebone sifts through oyster reefs along Georgia's coast, where the invasion of a dime-sized tropical crab is having both positive and negative effects. The fast-producing green porcelain crab may be competing with oysters for food. "They are probably having more impact on the ecosystem by being prey than by being predators," says Mark Hay, a professor in the School of

Biology at Georgia Tech. The invasion of the tiny tropical crabs could have a big impact because oysters are a foundation species essential to the health of coastal ecosystems. "We're not sure what's going to happen," Hay says. "We can't really raise the alarm because we don't have the data to say these crabs are doing something bad. It's possible that they will not have a huge effect at all." >>>



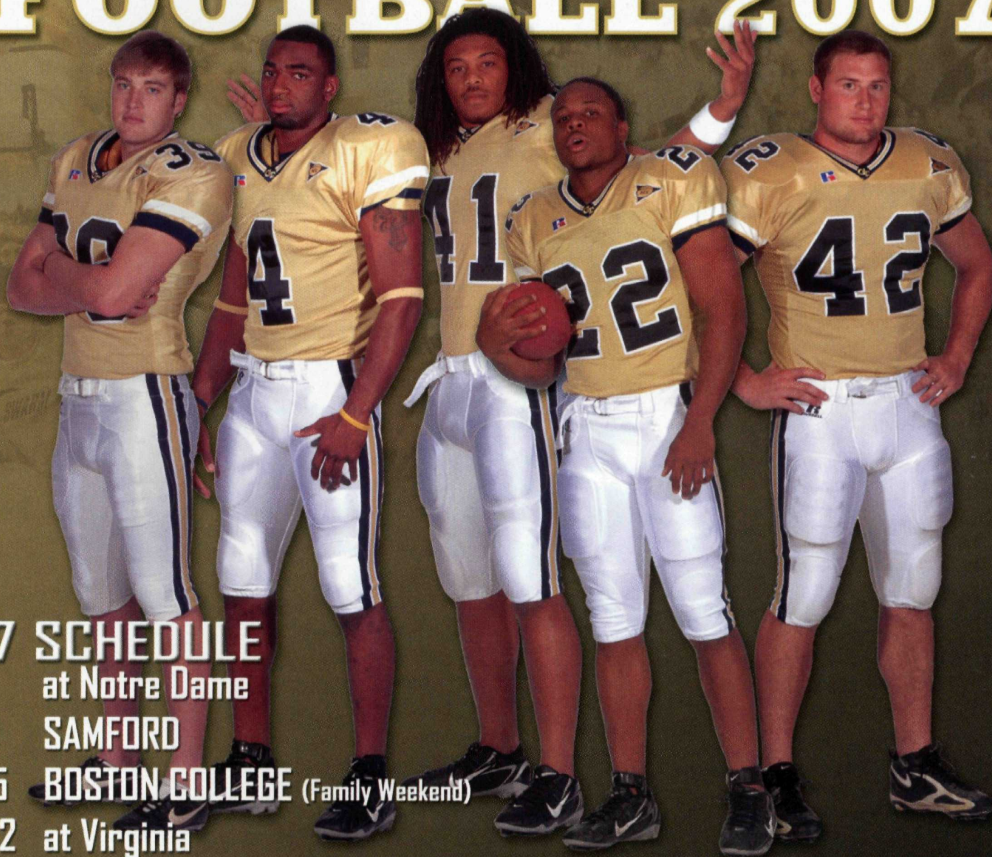


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THE YELLOW JACKETS PRESENT

# Georgia Tech FOOTBALL 2007



## 2007 SCHEDULE

Sept. 1	at Notre Dame
Sept. 8	SAMFORD
Sept. 15	BOSTON COLLEGE (Family Weekend)
Sept. 22	at Virginia
Sept. 29	CLEMSON
Oct. 6	at Maryland
Oct. 13	at Miami
Oct. 20	ARMY (Homecoming)
Nov. 1	VIRGINIA TECH
Nov. 10	at Duke
Nov. 17	NORTH CAROLINA
Nov. 24	GEORGIA

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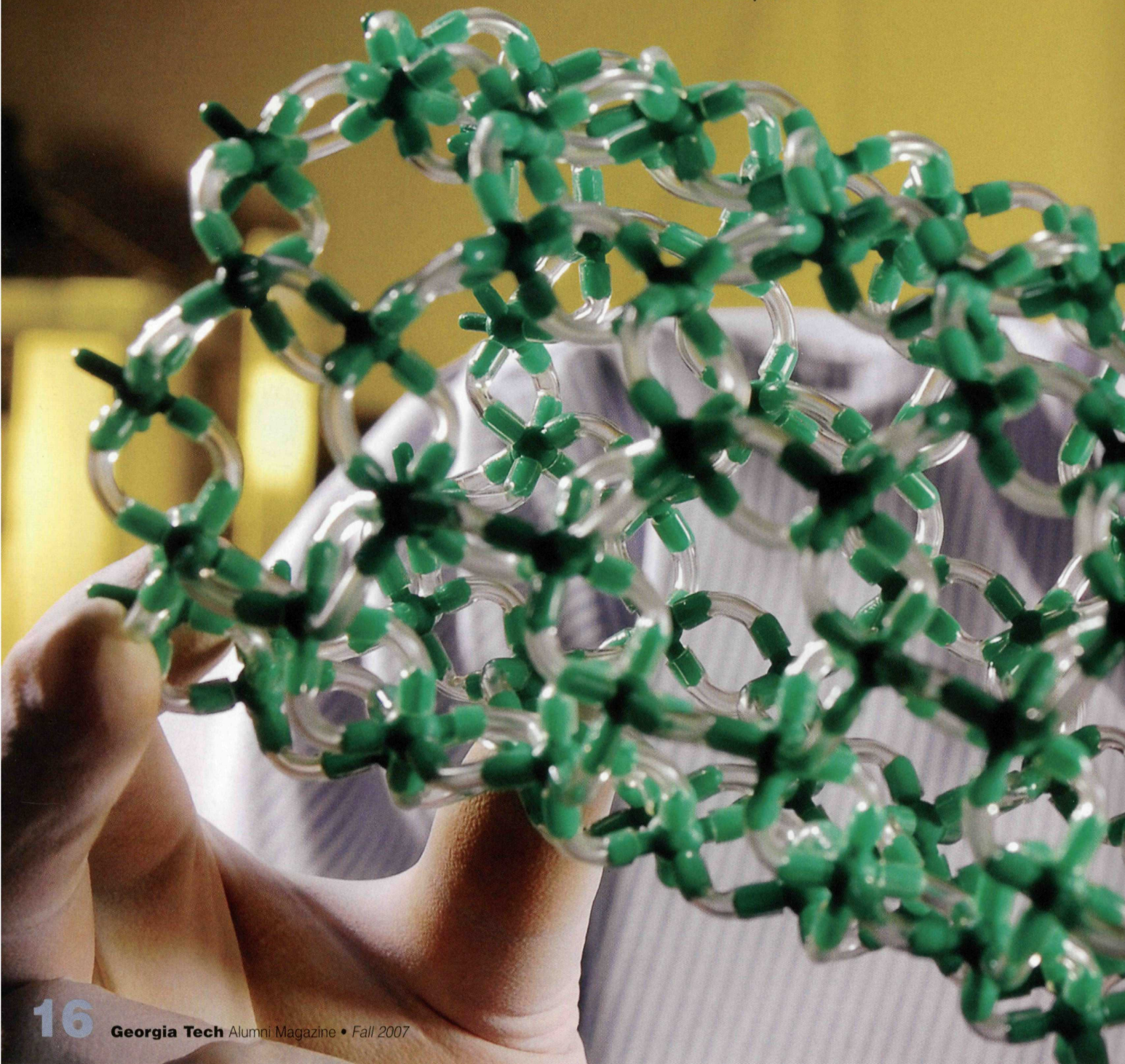


## Nanotube Formation

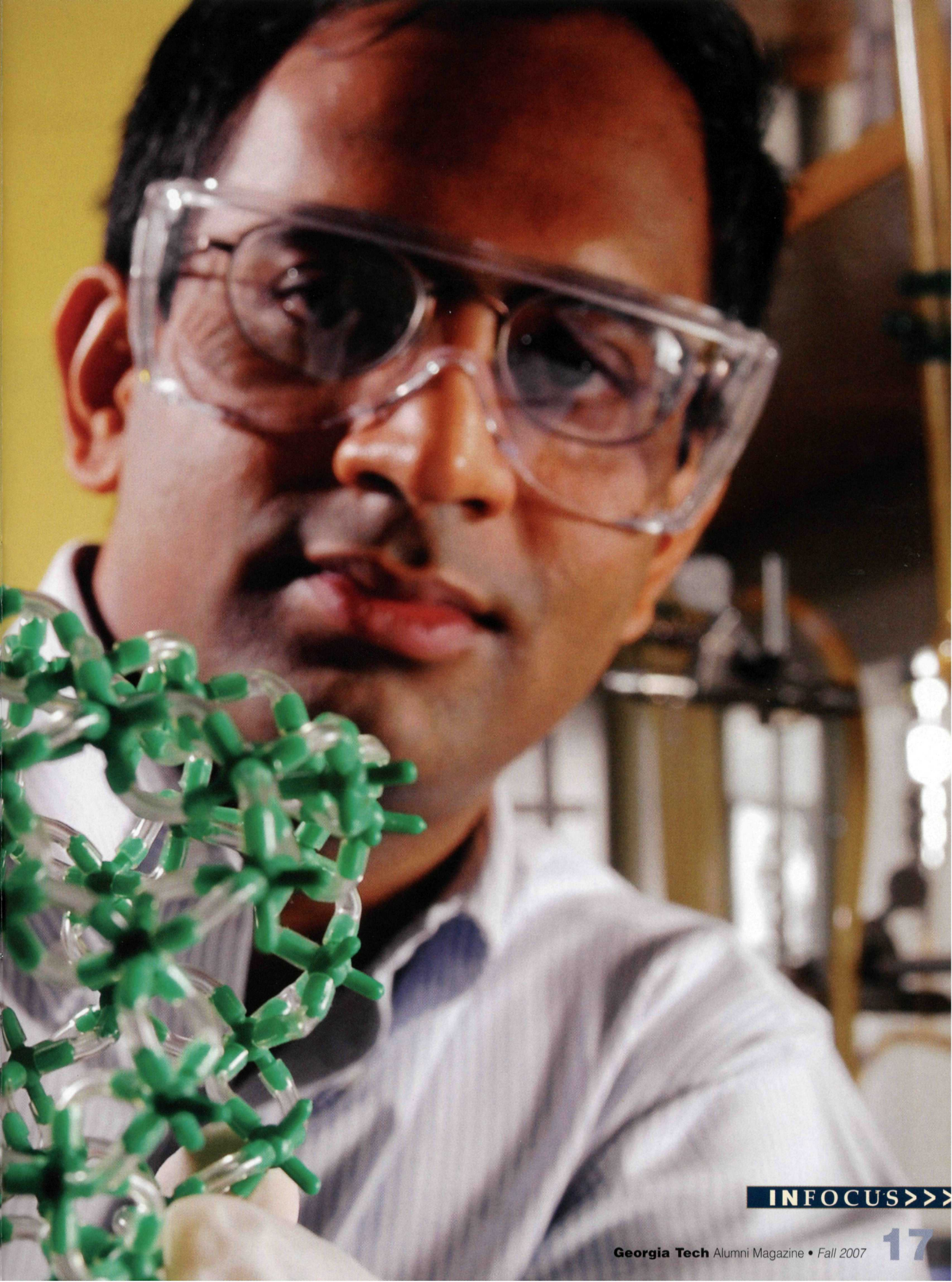
Sankar Nair, an assistant professor in the Georgia Tech School of Chemical and Biomolecular Engineering, holds a model showing the structure of the metal oxide nanotubes he is developing. The research could lead to a technique for precisely controlling the dimensions of the structures. Research on the remarkable class of tubular nanomaterials was presented in August at the National Meeting of the American Chemical Society.

>>>

Photo: Gary Meek







**INFOCUS>>>**





Photos: Gary Meek

## Sting Racers Maneuver into Finals

Using a Porsche Cayenne as its test vehicle, Georgia Tech's Sting Racing team competing in the DARPA Urban Challenge passed its site visit and was flagged as one of 36 teams judged technologically capable of competing in the final round. The team's autonomous vehicle, Sting 1, successfully completed the evaluation tests, including navigating a test course that involved merging into moving traffic, navigating traffic circles, negotiating busy intersections and avoiding obstacles. "As a first-year competitor in the Urban Challenge, qualifying for the semifinal round is a major accomplishment and testament to the passion and dedication of our team," says Henrik Christensen, KUKA chair of robotics in the College of Computing and Sting Racing principal investigator. "Our robotics program is relatively new, but the progress we have shown over a short period of time has positioned us among the best in the nation." For nearly a year, the team has been working to program the robot to drive autonomously by staying on course and recognizing obstacles in its way, such as other cars. The top teams will participate in the national qualification event in late October. DARPA — Defense Advanced Research Projects Agency — will award \$2 million, \$1 million and \$500,000 awards to the top three finishers that complete the course within the six-hour time limit. **GT**







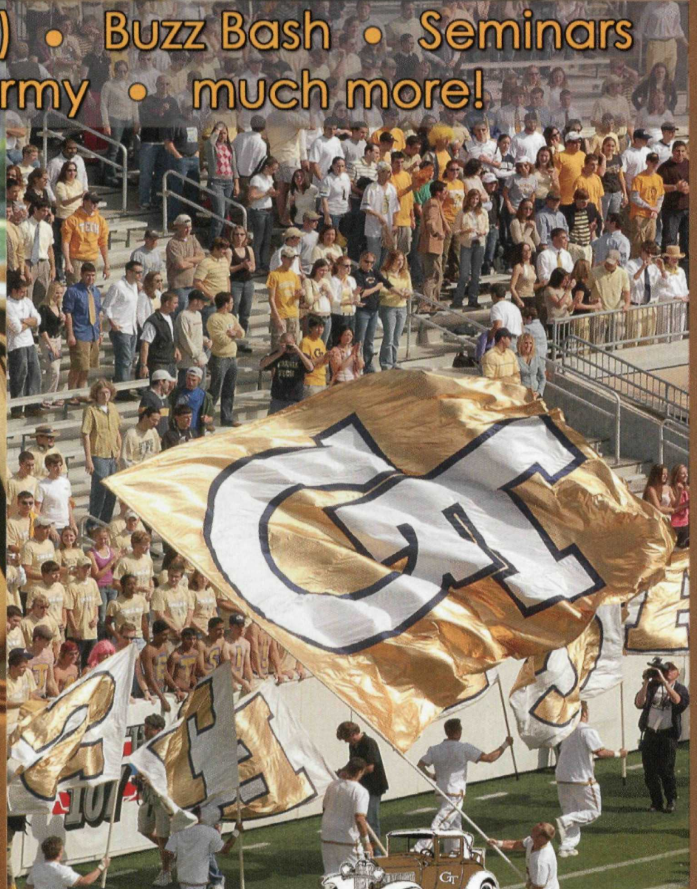
# Homecoming Weekend

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# SCHEDULE OF EVENTS

## THURSDAY, OCTOBER 18

7 – 8:30 p.m.

**Wine Tasting Reception: Old World vs. New World**

## FRIDAY, OCTOBER 19

7:30 a.m. - 2:45 p.m.

### **Seminars and Campus Tours**

Enjoy presentations such as The "Buzz" on GT Athletics with Wes Durham and Dan Radakovich, The Global Water Challenge, Zoo Atlanta & Georgia Tech, Alumni Heroes of World War II and more!

3:30 – 4:30 p.m.

### **State of the Institute Address by Dr. Clough**

6:30 – 10 p.m.

### **50th Reunion – Class of 1957: Up with the White & Gold!**

Celebrate this milestone reunion as you enjoy an elegant dinner, dancing, a performance by the Glee Club and much more. In addition, 50th year graduates will be inducted into the prestigious Old Gold Society.

7 – 11 p.m.

### **40th Reunion – Class of 1967: Twistin' the Night Away**

Class of 1967 graduates will enjoy a fabulous dinner and drinks, and dance to the music of the era performed by the Fabulous Classics!

7 – 11 p.m.

### **25th Reunion – Class of 1982: Shake It Up!**

Class of 1982 graduates will enjoy drinks and dinner in the Alumni House's beautiful Basil Garden while listening to music of the late '70s and early '80s as they catch up with old friends.

7:30 – 10:30 p.m.

### **Buzz Bash 007...It's Bond, Buzz Bond**

Enter the sophisticated world of James Bond at Tech's highly anticipated all-alumni celebration for the ultimate 007 experience with live music, food and drinks, a mock casino for prizes, fireworks over the stadium and much more!

## SATURDAY, OCTOBER 20

8 a.m.

### **Ramblin' Wreck Parade**

2.5 Hours

Before Kick-off

### **Homecoming Tailgate Party**

Time TBD

### **Georgia Tech vs. Army**

Postgame

### **Old Gold Society Reunion**

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**"Buzz Bash is one of the best kept secrets at Tech. The food, decor, entertainment, fireworks, etc. are always INCREDIBLE!"**



# TECHNOTES

## Giant Elm Felled



A limb from the majestic elm will be transformed into a wood-turned bowl.



A more than 100-year-old elm that graced the Basil Garden outside the Alumni House was severely damaged by a storm and taken down.

In late August, storm winds ripped one of three towering forks off the elm's trunk. The splintered trunk crashed into the Alumni Association parking lot and damaged one of only two cars there at 4 p.m. on a Sunday.

An arborist determined that the tree was damaged so badly that it would die. The tree was estimated to be between 130 and 150 years old and near the end of its life cycle.

A limb was saved for Matt Moulthrop, MBA 04, who will craft it into a wood-turned bowl to commemorate the centennial of the Alumni Association, which will be celebrated in 2008. His father, Philip Moulthrop, also is a wood turner, as was his father, Edward Moulthrop, who taught architecture and physics at the Institute in the 1940s.

One of the oldest trees on campus, it survived Dutch elm disease, which was first found in the United States in Ohio in 1930 and spread throughout North America. The disease destroyed more than half the elm trees in the northern United States.

## Tech Scores Highest Ranking

Georgia Tech has received its highest ranking yet from *U.S. News & World Report*.

In the magazine's annual "Best Colleges" issue, Tech is seventh among the nation's public universi-

ties for undergraduates — the highest ranking in the Institute's history — and is among the top 10 public universities for the ninth consecutive year.

Tech moved up to the seventh spot from eighth last year among public universities and moved up two spots to 35th among all national universities.

"Georgia Tech continues to distinguish itself as one of the top national universities over the last decade," says President Wayne Clough. "This recognition reflects the high quality of our programs, faculty and students and our growing momentum."

According to the *U.S. News* rankings, Georgia Tech alumni continue to be among the most generous. The percentage of Tech graduates contributing to the Institute is the highest for any public university ranked in the top 50.

Jim Shea, vice president of Fundraising and Business Development for the Alumni Association, says contributing to the Institute's annual fund is "one of the

only ways alumni can actually impact the value of their degrees after graduation, and the amount contributed is not a factor — it's the percentage of alumni that contribute that counts.

"Each year, if a larger percentage of alumni join their classmates in giving, the *U.S. News & World Report* score can rise. Tech moves up in the rankings







Photos: Matthew Bain

**TECHNOTES >>>**

and the degree increases in value," Shea says.

Georgia Tech's nationally prominent College of Engineering, which is the nation's largest, moved up in the rankings to fifth, compared to sixth last year. The College of Engineering had four of its programs ranked in the top five among specialty areas. Industrial engineering ranked first, aerospace ranked second, biomedical placed third (up from fourth last year) and civil engineering ranked fifth.

Tech's internship and cooperative education programs were ranked among the 14 "Academic Programs to Look For" under internships for the second consecutive year. For the second consecutive year, Tech was also selected as one of 35 outstanding examples of undergraduate research opportunities among undergraduate research/creative projects.

"I am especially pleased to see Georgia Tech among the leaders in internship and co-op opportunities as well as undergraduate research," says Clough. "Tech seeks to offer our students the best academic experience possible and that includes real-world and research opportunities."

## Alum Represents Tech at Capitol

Alumnus Dene H. Sheheane has been appointed as the Institute's director of Government Relations, representing Georgia Tech at the state Capitol.

Sheheane, Mgt 91, says he is eager to "serve the institute that played such a major role in shaping

my life." He replaced Andrew Harris, who retired earlier this year.

Sheheane previously was associate vice president for external affairs at Georgia State University. Before that, he worked in the Georgia governor's office during the early 1990s.

"Georgia Tech has earned many friends in state government, and I am committed to strengthening those relationships to ensure the Institute's strategic goals and priorities receive outstanding support and recognition," he says.

Sheheane, who earned an MBA at Georgia State, chairs the National State Relations Task Force, an organization comprised of higher education government relations professionals from across the country.

Giving to Roll Call is "one of the only ways alumni can actually impact the value of their degrees after graduation, and the amount contributed is not a factor — it's the percentage of alumni that contribute that counts."

## Exceptional Exhibit

A collection of memorabilia, including the oldest known Georgia Tech cheerleading uniform, is on permanent display in the Alumni House.

"This is an amazing collection," says Marilyn Somers, director of the Alumni Association's Living History program. "The Tech cheerleading uniform is by far the oldest one known to exist, and the fact that it's in perfect condition is simply incredible."

The uniform, which was worn by John H. Woodall Jr., Cls 38, was donated to the Alumni Association by Woodall's son, Henry, along with several other items: a pair of wooden pattern >>>





Marilyn Somers, director of Living History, joins Richard Smith, senior designer for Murphy & Orr Exhibit Co., at the Alumni House display case.

Photo: Scott Dinerman

models built about 1900 for a wood-working class, two fisherman-style cheerleader hats dating back to the 1930s and a Georgia Tech pennant probably from the early 1900s.

The custom-built display case was donated by Murphy & Orr Exhibit Co. president Jerry Murphy, IM 71, and vice president Tom Murphy, IM 62.

## Homecoming Thrills

The Ramblin' Wreck Parade observes its 75th anniversary at Homecoming, anticipated to provide plenty of thrills — it has a 007 theme.

The highlight of the drama will be Georgia Tech waging a gridiron battle against Army during the Oct. 18-20 weekend that features stimulating seminars, class reunions and an action-packed Goldstinger Buzz Bash with a James Bond theme.

Alumni can get a jump on the weekend at a wine-tasting reception that compares old and new world offers, followed by a day of informative seminars, campus tours and reunions beginning at 7:30 a.m. Friday. The Class of 1957 will observe its golden anniversary, the Class of 1967 its 40th and the Class of 1982 its 25th reunion. The Goldstinger Buzz Bash for all other classes begins at 7:30 p.m.

Get an early start Saturday and catch the Ramblin' Wreck Parade, the 75th year of imaginative contraptions and student ingenuity; have a hearty meal at the Homecoming tailgate party that

starts two and a half hours before kickoff; then enjoy exciting Yellow Jackets football.

An Old Gold Reunion, for all alumni who have already observed their 50th anniversary, will be held after the game.

## TEAM Buzz National Impact

TEAM Buzz, launched by a group of Georgia Tech students as a way to lend a helping hand to the Atlanta community, begins its second decade on Oct. 27 with a national boost from thousands of volunteers stretching across the country.

Georgia Tech Clubs have turned the day of community service into a national event. Jane Stoner, senior manager of Alumni Clubs, says about 40 clubs observed TEAM Buzz Day by participating in projects to beautify and benefit their communities last year. The number of participating clubs actually is higher as some groups do community outreach events on other days throughout the year.

More than 15,000 volunteers and 100 nonprofit agencies donated time and resources to projects during the past decade of service that varies from working to help beautify low-income neighborhoods to planting trees along Tech Parkway.

"TEAM Buzz is now in its 11th year," Stoner says. "Clubs throughout the country participate in this annual goodwill event because service to others is an integral part of Georgia Tech tradition."

Founder Tony Chan says the program gives him a great sense of pride. "I would never have believed it would get this big." **GT**

This year's Homecoming celebration spotlights the Ramblin' Wreck Parade, honoring 75 years of imaginative contraptions and student ingenuity.



Photo: 1962 Blueprint



# The Ramblin' wreck by the numbers

Ramblin' Wreck from Georgia

And a hell of an engineer

Helluva, helluva, helluva, hell

I like all the jolly good fellows,

drink my whiskey clear

Ramblin' Wreck from Georgia

And a hell of an engineer

Oh! If I had a daughter, sir,

I'd dress her in White and Gold,

and put her on the campus

where the Brave and Bold.

But if I had a son, sir,

show you what he'd do

would yell, "To hell with Georgia,"

like his daddy used to do.

117,720  
Active ramblin' wrecks or Georgia Tech alumni

45,865  
Jolly good fellows have given to Roll Call as alumni

0  
Schools in the nation have larger engineering colleges than Tech

0  
what the UGA football team can expect on 11/24/07

5  
campus facilities which have opened in the past year or are under construction supported by Roll Call funds

9  
consecutive years Roll call donors have helped Tech place among the Top 10 best public colleges and universities in U.S. News & World Report rankings

17,000  
current Tech students who benefit from Roll call funds every day

Roll call is as vital a part of Georgia Tech as the Ramblin' wreck

Make your investment in Georgia Tech by becoming a Roll call donor today!

Wish I had a barrel o'

gar three thousand pounds

A college bell to put it in

and a clapper to stir it round.

I'd drink to all good fellows

Who come from far and near.

I'm a ramblin', gamblin',

Hell of an Engineer!

\$8,400,000  
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# Being the Best

*Chip Akridge does business by the book — the Boy Scout Handbook*

By Tim Warren

Chip Akridge has helped change the face of Washington, D.C., but the business philosophy of this real estate entrepreneur isn't about grand designs. It's about doing things right and doing the right thing. A large part of Akridge, a real estate development firm headquartered in downtown Washington, is about customer service.

Akridge, ME 68, carries a laminated card in his wallet. One side of the card lists the company's four guiding principles: people, integrity, quality and community involvement. The other side lists "10 Customer Service Essentials." The 10 most important words, for instance, are "I apologize for our mistake. Let me make it right."

If this seems Boy Scout-ish in an era when many people won't even own up to mistakes, well, it is.

John E. "Chip" Akridge III was an Eagle Scout growing up in Knoxville, Tenn., and he counts that time as a life-defining experience, guiding him not only in business but also in numerous community issues, such as the environment and homelessness.

"Scouting was a big influence — that's where my beliefs in God and country were reinforced," Akridge says. He begins reciting rapidly from memory the qualities every Boy Scout is supposed to strive to attain: "trustworthy, loyal, helpful, friendly, courteous, kind, obedient, cheerful, thrifty, brave, clean and reverent." Then he smiles.

"I still believe in those things," Akridge says. "I've had the advantage of both strong down-home roots and many years of urban living in Atlanta and Boston and Washington. That combination has served me well both professionally and in my personal life."

Akridge came to Washington in 1972, fresh from an Army tour in Vietnam. Three and a half decades later, he has built and managed more than 10 million square feet of office space. Along the way, he has continued to stress the values he learned early on.

"We decided in 1974 to be the best at what we do, not the biggest," he says, "and to concentrate on quality, not quantity. The second thing was to convince ourselves that we were in the service business, not the space business, and the most important people are our clients."

To this day, he visits weekly each of the office buildings that his company manages — "to make sure no dead bodies are in the lobby," he says, jokingly.

This trademark attention to detail has earned Akridge widespread recognition for customer service and for its role in the growth of the city. Several of his projects went on to be named Office Building of the Year by the Building Owners and Managers Association, and Akridge Co. consistently is cited for its efforts in constructing or maintaining environmentally friendly buildings. >>>



In 2006, Akridge was inducted into the Washington Business Hall of Fame. In 2004, his most ambitious project, the multiuse Gallery Place, opened to wide acclaim. Two decades earlier, the neighborhood in which Gallery Place was built had been dicey at best. Now, with the Verizon Center, home of Washington's pro basketball and hockey teams, serving as the centerpiece, the area is full of office workers, tourists and folks out for a night on the town — and plenty of residents. Gallery Place, with its restaurants, shops, movie theater complex and residential units, has helped complete the transformation of a once-neglected area of Washington and continue Akridge's longtime involvement in changing the city itself.

"When I came here in 1972, Washington was a very sleepy Southern town," Akridge says, his Tennessee drawl still evident. "There weren't a lot of amenities — the Kennedy Center was here, but not a whole lot else. There weren't many great restaurants. Almost everything east of 16th Street to the Capitol was dead, night and day. But Washington was the capital of the world and the center of our government, and you could just see the potential."

Now, he says, "we've become a real city as opposed to an urban office park. We also have a local governance with respect and ability. We have a tremendous arts presence here — the theater and the opera and a world-class symphony. There's entertainment and restaurants and parks. And there's an educated, multiethnic population."

### Singularly Focused

In the past four years, Akridge's interest in shaping the city has taken another form, as chairman of the Trust for the National Mall, a nonprofit group formed, he says, "in response to the deplorable conditions there."

It's a topic on which he quickly grows serious.

"Patriotism runs pretty deep in me, and this issue hit me like a ton of bricks," Akridge says. "The National Mall in Washington is visited by 25 million people a year, but there are no wayfaring signs, no audio tours, no educational opportunities, few rangers to help people out, few bathrooms. My goal with the National Park Service is to make the Mall a world-class space 365 days a year. This is America's front yard, and every American should be proud of it. Right now, this American is not." With his unassuming manner and self-deprecating humor, Akridge initially seems more good ole boy than business tycoon.

For instance,

he says of his role as company chairman, "I'm just the bandleader. I just surround myself with good people who do the work." But it's quickly obvious that he's shrewd and articulate and able to cut to the heart of an issue in seconds.

Akridge is also singularly focused, a valuable asset in an often volatile profession.

"You have to remember that the normal gestation period for a building project is eight to 10 years, from securing the rights to opening the doors," he says. "With Gallery Place, for example, anything that could go wrong did go wrong. The general contractor went bankrupt. The litany goes on and on, but we toughed it out."

Caroline Cunningham, president of the Trust for the National Mall, says, "His perseverance is amazing. It took Chip three and a half years to get some important agreements signed with the National Park Service. But when he believes in something, he believes it will happen and he will put the shoulder behind the wheel. When you're a busy person running a business, doing the phone calls and the outreach is very time-consuming. But it's very personal to him."

Preserving the Chesapeake Bay also has become a personal mission, ever since Akridge moved his family to Maryland's eastern shore in 1982. After learning that runoff from farms was contributing to the bay's poor water quality, he stopped commercial farming on his property and began efforts to preserve the wetlands. "A lot of the habitat of various species was being wiped out," Akridge says. "I decided to do my part."

Will Baker, president of the Chesapeake Bay Foundation, of which Akridge has been a board member, says, "Chip has made his land as environmentally sensitive as possible. He's a full-service environmental advocate. There have been developers who have not been sensitive to the air quality and the water quality, but Chip is a great exception."

### Full Days, Short Nights

Not surprisingly, Akridge's schedule allows little time for diversions. One exception has been Georgia Tech. He was a member of the Georgia Tech Advisory Board for 10 years, including serving as its president.

Akridge rises every morning at 3:30, and after reading the Bible for 30 minutes — a current goal is to read every chapter — he spends the next couple of >>>

*An architectural landmark, the 17-year-old Homer Building office and retail project includes 420,000 square feet. With a four-story terra cotta facade and 12-story atrium, the building is the first in the Akridge portfolio to become an Energy Star Partner. Below: Akridge with District of Columbia Rep. Eleanor Holmes Norton at an event for Akridge's Burnham Place at Union Station.*











hours answering e-mails before moving on to paperwork and other tasks. By the time he's doing business with others at 8:30 or so, he has already put in close to a full day's work. He is usually ready for bed by 8:30 or 9 p.m. and doesn't watch movies or television, except for the occasional football game.

Although he is a devotee of adventure travel — he has visited both the North and South poles and has run a marathon on the Great Wall of China — he'll still get up early for hours of e-mail reading before moving back into vacation mode.

This trait of determining what he wants and then going after it was evident early on. In Knoxville, he began working at age 13 for a family friend in the real estate business, starting out by cutting grass and ending up as a construction manager at one of his projects in Atlanta. Akridge chose mechanical engineering as his major at Georgia Tech because he knew it would help him in his career. "And anyway, I wasn't any good at English or foreign languages."

He calls his four years at Tech "just a great experience doing real-life stuff. I was a C student, but I was president of my class for three years and basically did everything that could be done by a student. For example, the Student Council worked hand in hand with the university in almost every-

thing. One year, when the football team went to the Gator Bowl, they came to us and said, 'Here's \$75,000 in student tickets. You take care of them.' And we did."

When Akridge got out of the Army in 1972, he and his wife, Sally, methodically went about planning the next move. They spent several months visiting various cities — Boston, Atlanta, Houston, Dallas, San Francisco among them — before settling on Washington. "What we were looking for was a good marketing area with stable growth, without a lot of booms and busts, and Washington fit the bill."

After two years working with another developer, Akridge started his own company. At first, it seemed like a terrible idea.

"It was pretty scary," he says now, shaking his head. "In 1974, '75, the prime rate hit 21. Fortunately, as my granddaddy once told me, 'If you have a choice between skill and luck, take luck every time.' The luck for me was that I did not have a project going on when the prime was at 21. It was the best thing that happened to me, though I didn't know it at the

*Atop a Metro station, Gallery Place is a 1.5 million-square-foot downtown landmark and destination for shopping, dining, entertainment, living and working. Akridge opened the property in 2004. Below: Akridge with son William at commencement in 2005.*





time. My wife was pregnant with our first child, and I was thinking, 'What have I done? I've got to get a job.' But I learned a lot of lessons in those couple of years, and one was that this is a cyclical business, and to stay in business you need to be structured to ride out the bad times."

### Man in the Gray Flannel Suit

When lobbyists and lawyers started flocking to the nation's capital in the late 1970s, the market in office buildings opened up. Akridge acknowledges that many of his early projects were not particularly distinctive — "the K Street Box," as he describes them.

"I'm not trained in urban design and planning, so much of what we've done until recently has been market-reactive," he says. "We would try to assess what would sell and what the market was looking for in quality of design, quality of finish, location. We design most of our

buildings from the elevator core out as opposed to the skin in."

Told that a competitor, who asked not to be named, described his buildings as "sound, well-constructed but perhaps overly conservative," Akridge pauses a minute and then nods. "That's about right — we're the gray flannel suit instead of the tuxedo," he says.

But Gallery Place, a project on which Akridge collaborated with a recognized innovator, Herb Miller, showed that he was willing to break the mold. Another bold project looms — a multiuse complex near Union Station, for which Akridge recently secured the air rights after years of negotiation with the federal government.

"It may be a bit out there," he concedes of the new project. "Change is not easy at my age. But I'm going to keep on doing what I've been doing, because I'm having a ball." **GT**







## Brains Behind Biocontainment

Jon Crane raises the bar on laboratory designs

By Carol Carter

Jon T. Crane, Arch 77, knew early on that he wanted to be an architect, which is why the man who grew up in Athens, Ga., chose to go to Georgia Tech. What he didn't know was the extent to which science would shape his future. And while this expert in biocontainment didn't start out designing science buildings, he did start out in a laboratory.

"My dad was a scientist, so I spent a lot of time in his laboratories, back when kids could be in laboratories, and I got a good understanding of labs and science and scientists," Crane says. "So when I had the opportunity to do architectural work related to designing laboratory buildings, I was comfortable doing it and enjoyed it."

And Georgia Tech — specifically the Biotechnology Complex — benefited not only from Crane's architecture degree but also from his expertise in designing science buildings.

His firm, CUH2A, handled the design and architecture for the Molecular Science and Engineering Building, the fourth and final structure in the Biotechnology Complex. But that wasn't Crane's only contribution.

CUH2A wrote the program — that is, the space requirements and budget — for the Whitaker Biomedical Engineering Building. And before Crane and two partners founded the Atlanta office of CUH2A, Crane, then working for HOK architects in Atlanta, was the principal in charge of Tech's Ford

Environmental Science and Technology Building and the Parker H. Petit Institute for Bioscience and Bioengineering. Halfway through the Ford building project though, Crane left HOK to start the Atlanta office of CUH2A with colleagues Monica Bell and Jim Riley.

"We were developing, more or less, the science technology practice for HOK," Crane recalls. "Jim and I were working on laboratories, and Monica was business development director."

Though CUH2A has been in business for 45 years, it did not have an Atlanta presence until Crane, Bell and Riley formed it. Shortly after, their fourth partner, Bill Freeman, signed on.

"We joined CUH2A basically





because it is a firm that focuses on laboratory-related projects," says Crane, a CUH2A board member.

"And it is not just architects, but architects, engineers and planners that deal with science and technology projects. So it allows us to develop a real kind of expert team to do these projects that are very dependent on engineering and planning.

"It is probably one of the only firms in the world that really focuses on doing science technology projects, particularly when a project deals with integrating architecture and engineering into buildings," Crane says.

"Architectural firms tend to be more general practice and do a lot of different things. There are

a lot of firms that do some laboratory-related work, but there are very few that focus on it solely. We chose to focus on it because it is a unique niche."

Crane began his architectural career doing residential design, and it wasn't until he went to work for Tippet & Associates in Atlanta that he became interested in designing science buildings.

"We were doing some work at Emory (University) at the time," he says. "I got into doing the laboratories and health care-related work and also biocontainment laboratories."

Crane was hooked. And he had come upon an area — biocontainment — in which he would become a leader. In 1987, he moved from Tippet to the firm

now known as Lord Aeck Sargent and then to HOK in 1995. At HOK, he became global director of the science technology program.

Today, Crane is sought after both in the United States and around the world for his knowledge of biocontainment, which he describes as "facilities for the study of pathogenic infectious diseases."

Crane has been involved in more than 100 biosafety-level laboratories, including facilities for the Centers for Disease Control, the National Institutes of Health and the Army Medical Research Institute of Infectious Diseases.

"I have gotten involved a lot in the development of guidelines and things like that for containment facilities," he says. "I've writ-

ten a lot of articles and papers, and I teach a lot related to containment facilities and laboratory facility design."

At the end of the last decade, he traveled to Russia to evaluate, with the U.S. Defense Threat Reduction Agency, the former Soviet Union's weapons laboratories. He discovered "that they actually had pretty reasonably good, safe laboratories and an awful lot of them. And their engineering staffs were very good."

When he is not protecting the world from deadly viruses, Crane resides with Cindy, his wife and high school sweetheart, in the tiny town of Bostwick in Georgia's Morgan County. They have two grown children. **GT**



On Oct. 4, 1957, the Soviet Union launched Sp  
“Blessing or curse?” asked the *Georgia Tech Alu*  
transcript of a WGST radio program on which  
would become the launch of the space race. “S  
about it,” listeners heard. “What people most v  
telling. If there are radio messages back to Ear  
tion of what is being told about outer space wi



utnik and the free world was apprehensive.  
mnus a few weeks later, when it published a  
Institute scientists were quizzed about what  
Sputnik rolls on and so does the conversation  
want to know about Sputnik, Sputnik isn't  
th, they are going to the Soviets and the ques-  
ill remain a secret behind the iron curtain."

>>>



# MISSIONS

Physics professor Vernon Crawford moderated the panel that included the Engineering Experiment Station's Jesse James, who reported, "The signal at first was 'beep beep' in nature as almost everyone by now I'm sure has heard. Later, after about a week I believe, the signal stopped 'beep beeping' and sent out a continuous tone. This continuous tone doesn't have any modulation, that is, any as far as we were able to determine with our equipment here at Georgia Tech. Whether or not it is sending back any information to the Russians or not would be entirely a guess." Crawford posed a question many people were asking. "What social and political implications do you see in the artificial moon?" Nahun Medalia of the Social Sciences Department replied, "I think that many Americans are asking themselves pretty searching questions about the relative strength of our society and of Russia and about our adequacy to keep up with the Russians in future technological developments. ... There is a danger I think that this questioning may fall into the familiar pattern of overreaction in both the positive and negative direction toward Russia. I'm afraid of another era like 1952 or 1954 which divided our country into two opposing camps ... and brought with it an accompanying orgy of suspicion and security hysteria and this can only weaken us." Later, when the scientists were discussing how the Soviets beat the United States into space with the launch of the satellite, Crawford reflected, "I pray that we are not seriously behind in our basic research."





# ACCOMPLISHED

*Georgia Tech has been at the forefront of exploring the final frontier since the dawn of the space age*

By Nicole Branan

Photography: Courtesy of NASA except as noted

Fifty years ago, when the former Soviet Union stunned the world by successfully sending the first satellite into space, the final frontier burst open and the space race was launched. The nation felt a sense of urgency and in a few short years, President John F. Kennedy would commit the United States to land a man on the moon before the end of the decade. Over the next five decades, thousands of Georgia Tech alumni and scientists would play key roles behind the scenes and in the forefront of space exploration.

John Young, AE 52, remembers listening to President Kennedy's 1961 speech in which he announced his plans to send a man to the moon and return him safely back to Earth. "Returning safely to Earth sounded like a good idea to me, so me and my buddies applied," says Young, who was a Navy test pilot at the time.

His selection into the astronaut program the following year launched a 42-year career at NASA filled with achievements that are unmatched. His 1972 lunar landing is just one example. Along with crewmate Charlie Duke, he explored the lunar highlands at Descartes.

"It was a great mission," Young says matter-of-factly. "We had so many things to work on up there, we were running rather than walking most of the time. One-sixth gravity is nice. People will like it when we get back up there."

The Apollo 16 lunar landing was Young's second flight to the moon; three years prior, he and his crew orbited Earth's satellite and tracked proposed landing sites. And as backup crew

commander of Apollo 13 — NASA's lunar mission that ended nearly catastrophically after an oxygen tank aboard the spaceship exploded — Young and countless other NASA employees worked tirelessly on the ground to get the crew back to Earth safely.

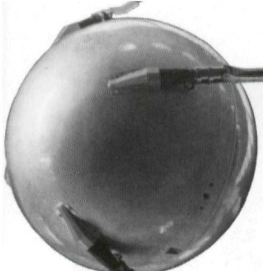
"The mission was 150 hours long and I was awake for 120 hours of it," he remembers and says that it was Georgia Tech that prepared him for demanding jobs like that. "Tech prepared us to work long hours and get stuff done and I think that's really important."

It's been 35 years since men last set foot on the moon but Young predicts going back will be a key to the future of the human civilization.

"The kind of technology you have to develop to live and work on the moon is the kind of technology that can protect >>>







Sputnik, the first human-made satellite, was 23 inches in diameter — about the size of a beach ball — and weighed 405 pounds. Its purpose was to send back temperatures of space, which it did in the form of an alarming and unidentifiable beeping that “doesn’t have any modulation, that is, any as far as we were able to determine with our equipment here at Georgia Tech. Whether or not it is sending back any information to the Russians would be entirely a guess,” said Tech professor Jesse James. Sputnik was in orbit for three months, then burned up on re-entry into Earth’s atmosphere.

our civilization when bad things happen to planet Earth — and they inevitably will,” he says. “A supervolcano or the impact of a massive asteroid could block out sunlight and these are things we can’t do anything about right now.”

Ever since retiring from NASA three years ago, Young has been working as a consultant for the design of a crew exploration vehicle and the lunar surface access module, the lander spacecraft component that NASA plans to build for future manned moon missions.

Another highlight in Young’s career as the longest-serving astronaut was commanding the first space shuttle mission, which returned from space in a winged re-entry vehicle to a runway landing rather than splashing into the ocean.

### Re-entry Technology

Navigating the shuttle through space is no easy feat and the most dangerous part of the journey lies at its very end, when the vehicle has to re-enter Earth’s atmosphere. At nearly 17,000 miles per hour the air molecules enveloping the Earth become a solid shield. That’s why a spacecraft thundering through the cosmic vacuum toward Earth has to hit the atmosphere at precisely the right angle, explains Bob Roper, retired Georgia Tech Earth and Atmospheric Sciences professor.

“If you re-enter just a little too steeply, you will burn up but if you enter too shallowly, you will bounce off the atmosphere back into space.” If that happens, the shuttle is doomed because it won’t have enough fuel to recover, Roper says. “And once you circle around the Earth, you will eventually just burn up in the atmosphere.”

Roper and his colleague Jere Justus are the brains behind NASA’s calculation of entry angle for all its shuttle missions. Their Global Reference Atmospheric Model figures the crucial parameters, such as air pressure, temperature, density and wind velocity, for any given mission point in space and in time. That allows crew and ground personnel to determine the entry corridor for the specific conditions present during the shuttle’s return.

Pressure, temperature, density and wind velocity are influenced by the position of the Earth in its orbit and by what’s going on in the rest of the atmosphere, Roper explains. For example, weather systems don’t just stay in the troposphere — the lowest layer of Earth’s atmosphere. Some of their energy travels upward and can affect the charac-

teristics of the atmosphere’s upper layers.

The team originally developed the model for NASA to use for the shuttle design in the early 1970s. “Once they had the model they could simulate flights and determine what kind of temperatures the shuttle would encounter from friction caused by air,” Roper says. The shuttle’s mantle is exposed to several thousand degrees Fahrenheit when it bursts into the atmosphere. “That’s where the idea of using ceramic tiles to shield the spacecraft against the heat came from.”

It wasn’t until the late 1980s that Roper and his colleagues discovered at a scientific meeting that NASA had been using their model on every shuttle mission. “That was a bit scary actually because whenever anything went wrong, the first thing I asked myself was: ‘Was the model at fault?’” Roper notes that none of the shuttle problems were related to GRAM.

### Upcoming Flight

NASA has flown more than 100 shuttle missions to date and this fall two Tech graduates — Doug Wheelock, MS AE 92, and Alan Poindexter, AE 86, will be on space flights.

Mission specialist Wheelock is scheduled to launch into orbit aboard Discovery on Oct. 23. During the 13-day mission, the crew will travel to the International Space Station, where it will launch a multi-port module for the station.


Wheelock, with an undergraduate degree from West Point in 1983, became an astronaut candidate in 1998. His extensive training included 10 days aboard the National Undersea Research Center’s Aquarius habitat. He also has served as NASA’s director of operations in Russia.

Poindexter will pilot Atlantis 240 miles up to the International Space Station in a mission slated to take off Dec. 6. “It’s going to be my first space flight and I am looking forward to it,” he says.

The mission’s main objectives are swapping one of the ISS crew members and bringing the European Space Agency’s Columbus laboratory — a cylindrical research facility about 15 feet in diameter — to the ISS. The complete transfer includes using Atlantis’ robotic arm as well as several spacewalks, which Poindexter will choreograph from inside the shuttle.

“The spacewalking crew members are outside with few resources as far as checklists go, so my role is to keep them on task and on timeline >>>





"The technical problems that led to the [Challenger] tragedy needed to be solved, but just as important was recreating trust within NASA and the employees that we were going to maintain as safe an operation as we could."

— Richard Truly

WARNING  
THIS AIRCRAFT CONTAINS  
DANGEROUS MATERIALS  
EXPOSURE TO THESE  
MATERIALS MAY BE  
DANGEROUS TO YOUR HEALTH  
AND THE ENVIRONMENT

DANGER  
EJECTION  
SEAT  
DANGER







and read the checklist to them," Poindexter says.

The training for shuttle missions is intense. Over the past months, Poindexter and his six crew members have been working 50 to 60 hours a week preparing for their individual tasks. Working well as a team is essential for the success of a mission, says Poindexter. That's why the crew spent 10 days backpacking in the wilderness of Utah's Canyonlands National Park last year.

"In a stressful environment, you really meld as a crew. We each learned everyone's idiosyncrasies and we got along just great," Poindexter says.

He had always wanted to be a pilot but it wasn't until Richard Truly, AE 59, gave a talk at Georgia Tech after landing a shuttle at night for the first time that Poindexter's interest in a career as an astronaut was piqued. Truly flew two shuttle missions but says he performed the most important accomplishment of his career from the ground.

### Recovering from Tragedy

In February 1986, only a month after the tragic Challenger accident shocked the world, Truly took over as NASA's associate administrator for space flight and led the painstaking rebuilding of the space shuttle program. It was a difficult job, Truly remembers.

"The technical problems that led to the tragedy needed to be solved, but just as important was recreating trust within NASA and the employees that we were going to maintain as safe an operation as we could," he says. "And another part of the challenge was to regain the trust of all the outside stakeholders, such as the Congress, the White House and the American people."

Neither of these transformations happened quickly, Truly says, but after about two and a half years, he and his team had accomplished all of them. His tireless efforts were celebrated with the "return to flight" in 1989 when Discovery lifted off from Kennedy Space Center, Fla. Only a few months later, Truly became NASA administrator. He headed the administration for three years before returning to Georgia Tech as vice president and director of the Georgia Tech Research Institute.

### Great Adventure

About the same time, Bill McArthur, MS AE 83, went on his inaugural space flight. A series of shuttle missions followed and from October 2005 to April 2006 McArthur spent

six months as an Expedition 12 crew member aboard the ISS. "The best thing about Expedition 12 was knowing that I was living in space and that I could relax a little because the end of this great adventure wasn't just a few days away. That's the difference between living in space and visiting space," he says.

His days of routine tasks at the ISS were punctuated with some "very high-energy and high-stress activities, such as going outside," McArthur remembers. McArthur and Russian crewmate Valery Tokarev breezed through their outside tasks despite a false start during the first spacewalk.

He and Tokarev performed two spacewalks. "There is nothing like opening the hatch because you know you're ready to go out and there is nothing left to stand in your way."

When the space station is flying with its belly toward the Earth, hatch and airlock are at the bottom. "So when you are looking out of the hatch it's as if you are looking out of some giant facility down into an ocean of nothing with just the Earth hundreds of miles away — it's absolutely thrilling."

Floating in space tethered to a man-made satellite such as the space station is a risky business but it isn't fear of the hazards that worries spacewalking astronauts, says McArthur.

"What we are always concerned about is failing to accomplish the tasks that are laid out in front of us because we are responsible for making all the efforts of the people who prepared us successful. And that's the pressure we feel."

Most of the team's work was done aboard the station. In between routine maintenance tasks, conferences with the ground and lots of exercise, McArthur worked on a myriad of medical experiments.

For example, he participated in a study that tested whether potassium citrate could reduce the risk of kidney stone formation for space travelers. In microgravity, minerals leach out of the body's bones into the bloodstream which can lead to kidney stones, he explains. The long-term goal for studies such as this is to ensure that astronauts stay healthy and productive throughout a seven- to nine-month flight to Mars. >>>

"In a stressful environment you meld as a crew. We each learned everyone's idiosyncrasies and we got along great."

— Alan Poindexter  
(left)

Tech's first female astronaut, Jan Davis, ABiol 75, (below) gives a thumbs up in preparation for a space shuttle flight. Davis and female astronauts Susan Still Kilrain, MS AE 85, and Sandra Magnus, PhD 96, have all flown on shuttle missions.





"The best thing about Expedition 12 was knowing that I was living in space and that I could relax a little because the end of this great adventure wasn't just a few days away."

— Bill McArthur  
(at left on opposite page)

"In the field of aerospace engineering, it isn't good enough to just design and develop a product that meets the customer's specifications. Instead, you have to design it so that it meets the customer's needs better than anyone else's."

— Robert Loewy  
(right)

## Formidable Challenges

NASA's efforts to eventually send manned missions to the red planet are organized by its Exploration Systems Mission Directorate, which was headed by Scott Horowitz, MS AE 79, PhD AE 82, from 2005 to 2007. But such journeys require not only an evaluation of health risks but also a host of new technologies.

Robots have strolled Mars' rugged surface since 1976 but sending people to the red planet is a much more difficult task and engineers are looking for new concepts that could make human missions possible. Robert Braun, the David and Andrew Lewis professor of space technology at the Daniel Guggenheim School of Aerospace Engineering, is one of the trailblazers.

The challenges are formidable. "Mars has too much atmosphere to allow us to land like we do on the moon and too little atmosphere to let us land like we do on Earth," says Braun.

And the approach that NASA currently employs for its robotic Mars missions wouldn't work for a human spacecraft. For example, Mars exploration rovers Spirit and Opportunity slammed down on the planet's dusty surface within a target zone more than 100 kilometers in diameter.

"When we eventually send humans to Mars we will need to land much more precisely than that," says Braun.

"Precision-landing technology is important not only for the safety of the mission because Mars' surface terrain varies so greatly but also because we will have to land near surface equipment that is sent to Mars well

ahead of the crew to establish a base camp."

And human missions will carry a lot more mass than robotic missions. That requires new technologies to land

safely. "Past robotic missions have been about as heavy as half a car," says Braun. When these remote-controlled exploration vehicles — roughly the size of a golf cart — come screeching through Mars' atmosphere, parachutes about 15 to 20 meters in diameter open to brake the fall.

But a human mission to Mars will require landing one two-story house right next to another. "That means you would need a parachute the size of a football field," Braun says.

However, even if you had one, by the time it had opened fully in Mars' thin atmosphere, the crew would have slammed into the planet at supersonic speeds, he adds. That's why Braun and his team are developing special decelerators, such as inflatable aeroshells, that fly higher in the atmosphere and can slow the vehicle more rapidly than conventional systems.

## Designing for the Future

But even future robotic missions will likely require more advanced technology than is available today, says Braun. And many more robotic missions are needed before any human crews can set off for Mars. We still need to learn more about the resources that are available on the planet and how we could exploit them for future manned missions.

"For example, we would need to find out if we could extract oxygen from the atmosphere or water from the subsurface," says Braun. "Lewis and Clark didn't bring supplies for their entire journey with them. Instead, they lived off the land. We will have to do the same on a human Mars mission."

Whether it is for air or for space flight, designing new technology is a challenging job because only the best systems will be successful, says Robert Loewy, the William R.T. Oakes professor and chair of the School of Aerospace Engineering.

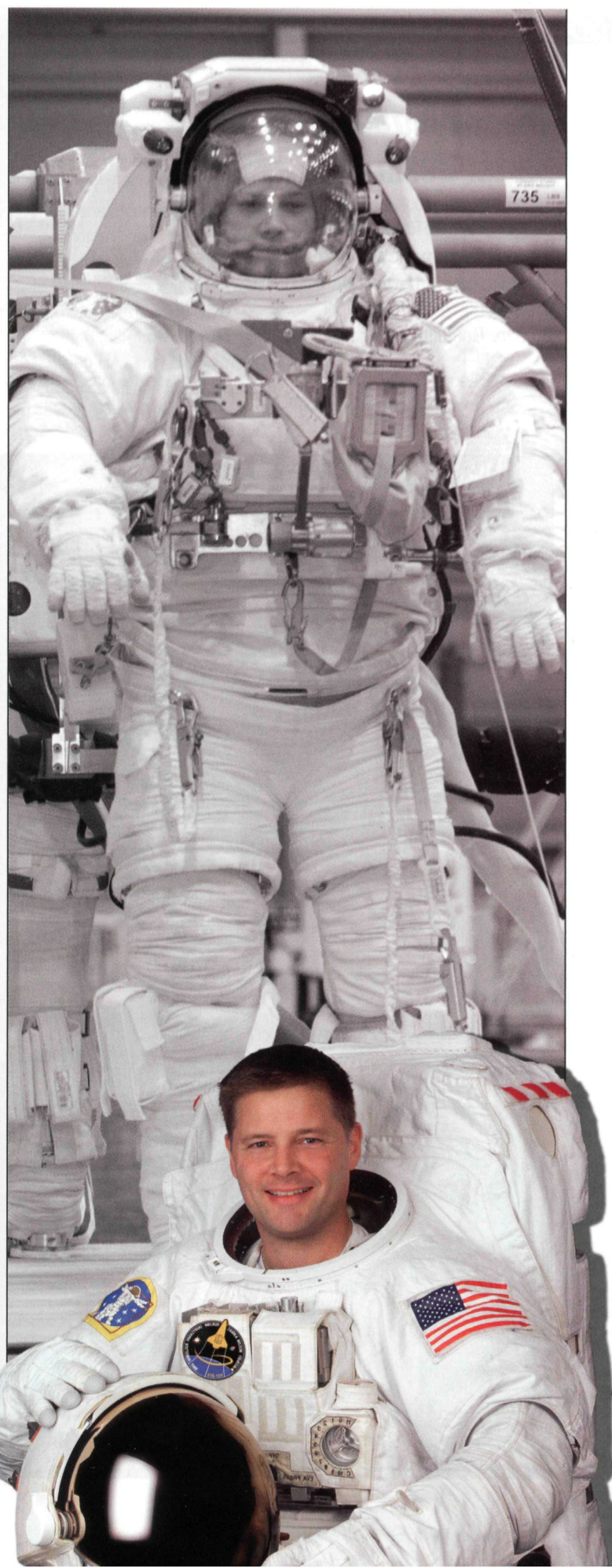
"In the field of aerospace engineering, it isn't good enough to just design and develop a product that meets the customer's specifications. Instead, you have to design it so that it meets the customer's needs better than anyone else's. For example, there aren't a lot of different Boeing 747s, there is only one."

And the job is crucial, he adds. "Transportation is frequently overlooked but it is extremely important. And that's what aerospace people are all about." **GT**



Photo: Gary Meek







## The Rahimzadehs' Better Beam

Father and son Rahimzadehs are building on the strength of construction innovation

By Gary Goettling

Every useful invention begins with the thought: There has to be a better way. And so it was with Housh Rahimzadeh, a 1964 civil engineering graduate and former vice president and director of engineering services at John Portman & Associates.

In his 35 years as a structural engineer with Portman, Rahimzadeh's (RAH-him-ZAH-dee) design projects have included Atlanta's SunTrust Plaza, San

Francisco's Embarcadero Center, Kuala Lumpur's Capital Square, Shanghai Center, Beijing's Silver Tie Center and Detroit's Renaissance Center. Rahimzadeh always believed there had to be a more efficient, less expensive and better quality-controlled framing system for multistory buildings.

About seven years ago, he had an idea. Why not combine the attributes of traditional framing materials — steel and reinforced

concrete — into a single structural beam as the main element, resulting in more shop fabrication and less insitu forming construction?

After months of experimenting with different designs, he settled on a U-shaped steel beam with steel studs inside. Filled with concrete, the finished beam combines the tensile strength of steel with the compression-bearing capacity of reinforced concrete, according to Rahimzadeh.

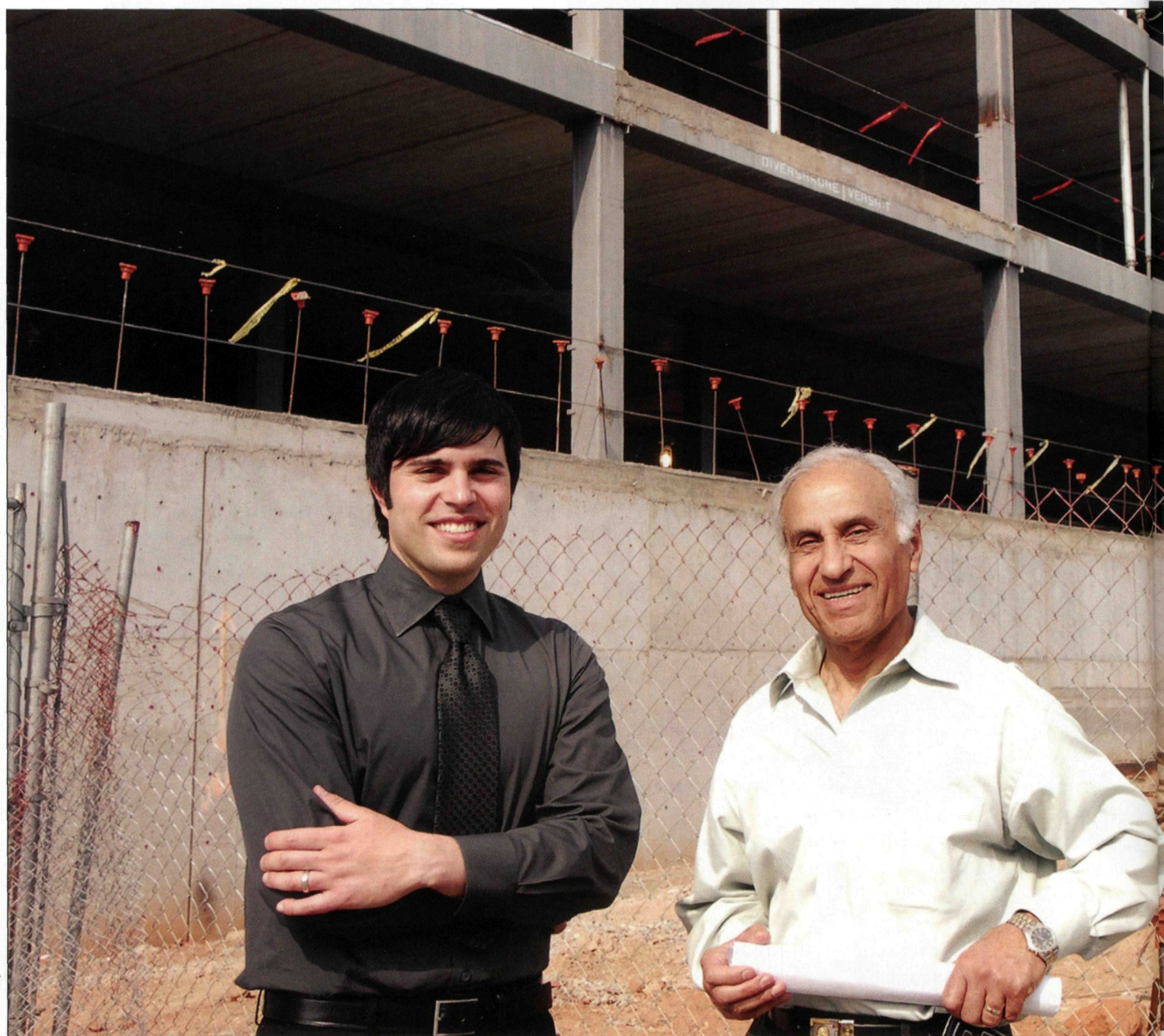


Photo: Gary Meek



"I started doing analysis to see how it would hold up and what the capacities would be when compared to reinforced concrete or steel," he says. "Just doing my own calculations, it all came out very positive."

To check his own back-of-the-envelope equations, he submitted the idea to the School of Civil and Environmental Engineering at Georgia Tech for testing.

"The beams met or exceed-

ed AISC standards for load, stress and deflection," says Stan Lindsey, a structural engineering professor at Tech's Savannah campus who led the testing protocols. "The testing capacity matched exactly to the theoretical capacity that my analysis had predicted. It verified the product's potential."

One of the first people to be "sold" on the beam's promise was Rahimzadeh's son, Marc, a 1997 industrial engineering graduate.

For the past two years, Marc has headed DIVERSAKORE LLC, an Atlanta-based company his father started to commercialize the invention, which is patented and marketed under the name VERSA:T.

Assembling a frame with VERSA:T is faster, more cost effective, plus it's a stronger beam, Marc notes. "You could engineer another beam to be just as strong, but it would take up more space and may require more materials. Our approach is more efficient. It's shallower than regular steel beams, and because of the concrete and additional reinforcing we add, it doesn't require spray fireproofing for a two-hour UL test rating, which is unheard of for a steel beam."

The VERSA:T beam is the main element of a completely new approach to structural framing. For example, when concrete is poured into the U-shaped beam framework, it also covers the structure's floor. As it cures, the concrete, beam and floor are fused together as one unit. If prefabricated flooring planks are specified in the plans, the materials can be quickly installed without the additional assembly and breakdown of forms and shoring for each floor.

Assuming a CEO position in the construction business was a major work-culture change for the younger Rahimzadeh, who spent most of his post-Tech business life building two companies and leading strategic development initiatives for large-scale enterprise Web solutions.

"I believed in what my father had come up with and his ability as a structural engineer," Marc says. "I studied the industry, and I got to understand the product, how it works and how it fits within the market. So I took the leap and haven't looked back."

Still, there were some things

that took a bit of getting used to. "I came from an industry that is very quick to adopt new technologies," he says. "A key differentiator on the services side is your ability to stay ahead of the game by knowing the latest and greatest and how to utilize it."

The construction industry, on the other hand, "places more emphasis on taking what you already know and squeezing out all of the waste and inefficiency."

The original idea was to license the use of the VERSA:T system. "We changed that strategy to become more of a turnkey supplier," Marc says. "We have developed a series of beams that we're marrying with other products to create complete framing systems that are optimized for different requirements and situations."

If they can maintain quality, contractors and developers are always interested in saving money, Housh says, "but the first thing everyone asks is: What have you built?"

The answer is getting longer. DIVERSAKORE completed its first project, a mixed-use high-rise in Decatur, Ga., called the Artisan, in February 2006. This past April, the company started work on an eight-story dormitory and parking deck at Spelman College in Atlanta. Coming up are a five-story mixed-use building in Chattanooga, Tenn., and a 10-floor hotel in Charlotte, N.C.

"Developers and contractors are beginning to see that they can save their clients money with our system," Housh says. "If you can cut two, three or four dollars per square foot from a large project of 100,000 square feet or more, you're looking at a lot of money. When these other projects get built, the exposure will help us and, hopefully, word of mouth among contractors will be our biggest friend." **GT**











# True North

By Bill George

*True North is the internal compass that guides you successfully through life. It represents who you are as a human being at your deepest level. It is your orienting point — your fixed point in a spinning world — that helps you stay on track as a leader. Your True North is based on what is most important to you, your most cherished values, your passions and motivations, the sources of satisfaction in your life. Just as a compass points toward a magnetic pole, your True North pulls you toward the purpose of your leadership. When you follow your internal compass, your leadership will be authentic, and people will naturally want to associate with you. Although others may guide or influence you, your truth is derived from your life story and only you can determine what it should be.*

**D**iscovering your True North takes a lifetime of commitment and learning. Each day, as you are tested in the world, you yearn to look at yourself in the mirror and respect the person you see and the life you have chosen to lead. Some days will be better than others, but as long as you are true to who you are, you can cope with the most difficult circumstances that life presents.

The world may have very different expectations for you and your leadership than you have for yourself. Regardless of whether you are leading a small team or are at the top of a powerful organization, you will be pressured by external forces to respond to their needs and seduced by rewards for fulfilling those needs. These pressures and seductions may cause you to detour from your True North. When you get too far off course, your internal compass tells you that something is wrong and you need to reorient yourself. It requires courage and resolve to

resist the constant pressures and expectations confronting you and to take corrective action when necessary.

## **The Leadership Crisis**

**A**n enormous vacuum in leadership exists today — in business, politics, government, education, religion and nonprofit organizations. Yet there is no shortage of people with the capacity for leadership. The problem is that we have a wrongheaded notion of what constitutes a leader, driven by an obsession with leaders at the top. That misguided standard often results in the wrong people attaining critical leadership roles.

“True North” is written for anyone who wants to be an authentic leader. It is for leaders at all stages of their lives, from those at the top of organizations to students preparing to become leaders to lifelong leaders looking for new opportunities. You are never too young, or too old, to take on leadership challenges and to lead authentically. It is grounded in the hundreds of years of experience of the 125 authentic >>>



leaders we interviewed as well as my own 40 years in leadership roles.

Authentic leaders not only inspire those around them, they empower them to step up and lead. Thus, we offer the new definition of leadership: The authentic leader brings people together around a shared purpose and empowers them to step up and lead authentically in order to create value for all stakeholders.

In "Authentic Leadership," I described authentic leaders as genuine people who are true to themselves and to what they believe in. They engender trust and develop genuine connections with others. Because people trust them, they are able to motivate others to high levels of performance. Rather than letting the expectations of other people guide them, they are prepared to be their own person and go their own way. As they develop as authentic leaders, they are more concerned about serving others than they are about their own success or recognition.

This is not to say that authentic leaders are perfect. Far from it. Every leader has weaknesses and all are subject to human frailties and mistakes. Yet by acknowledging their shortcomings and admitting their errors, they connect with people and empower them.

Leaders are defined by their values and values are personal — they cannot be determined by anyone else. Integrity, however, is the one value required of

every authentic leader. If you do not have integrity, no one will trust you, nor should they. The values of authentic leaders are shaped by their personal beliefs and developed through study, introspection, consultation with others and years of experience. The test of authentic leaders' values is not what they say but the values they practice under pressure. If leaders are not true to the values they profess, people quickly lose confidence in their leadership.

Authentic leaders lead with their hearts as well as their hands. To some, leading with the heart may sound soft, as though authentic leaders cannot make tough choices involving pain and loss. Leading with the heart is anything but soft. It means having passion for your work, compassion for the people you serve, empathy for the people you work with and the courage to make difficult decisions. Courage is an especially important quality for leaders as they navigate through unpredictable terrain.

### What Causes Disorientation?

Before people take on leadership roles, they should first ask themselves two fundamental questions: "What motivates me to lead?" and "What is the purpose of my leadership?" If honest answers to the first question are simply power, prestige and money, leaders risk being trapped by external gratification as the source of

their fulfillment. There is nothing wrong with desiring these outward symbols as long as they are combined with a deeper desire to serve something greater than oneself.

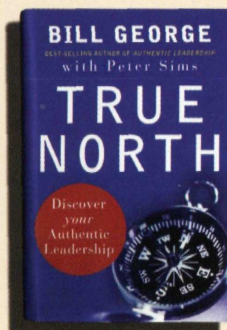
Leaders whose goal is gaining power over others, maximizing wealth or becoming famous tend to look to other people for satisfaction and acknowledgement of their status. In public and in private, they display a high degree of narcissism. As leaders of institutions, they ultimately believe that the institution cannot survive without them because in their mind they are the institution. A tragic example of this was Richard Grasso in his closing days as CEO of the New York Stock Exchange. Grasso got so caught up in his power and celebrity that he lost touch with the negative reaction to a public servant receiving a \$130 million compensation package and was forced to resign by his board.

In contrast, Xerox CEO Anne Mulcahy deflects most media attention, in spite of her success in turning the company around. She told us about receiving a telephone call from her mentor, former CEO David Kearns, when she was in the darkest hours of trying to keep the company out of bankruptcy and fending off an SEC investigation. "Mulcahy, do you believe all that bull they are writing about you in the newspapers?" Kearns asked over the phone. "No, David," Mulcahy replied calmly. "Good," responded Kearns. "Then don't believe it when they start writing about you as the savior of Xerox."

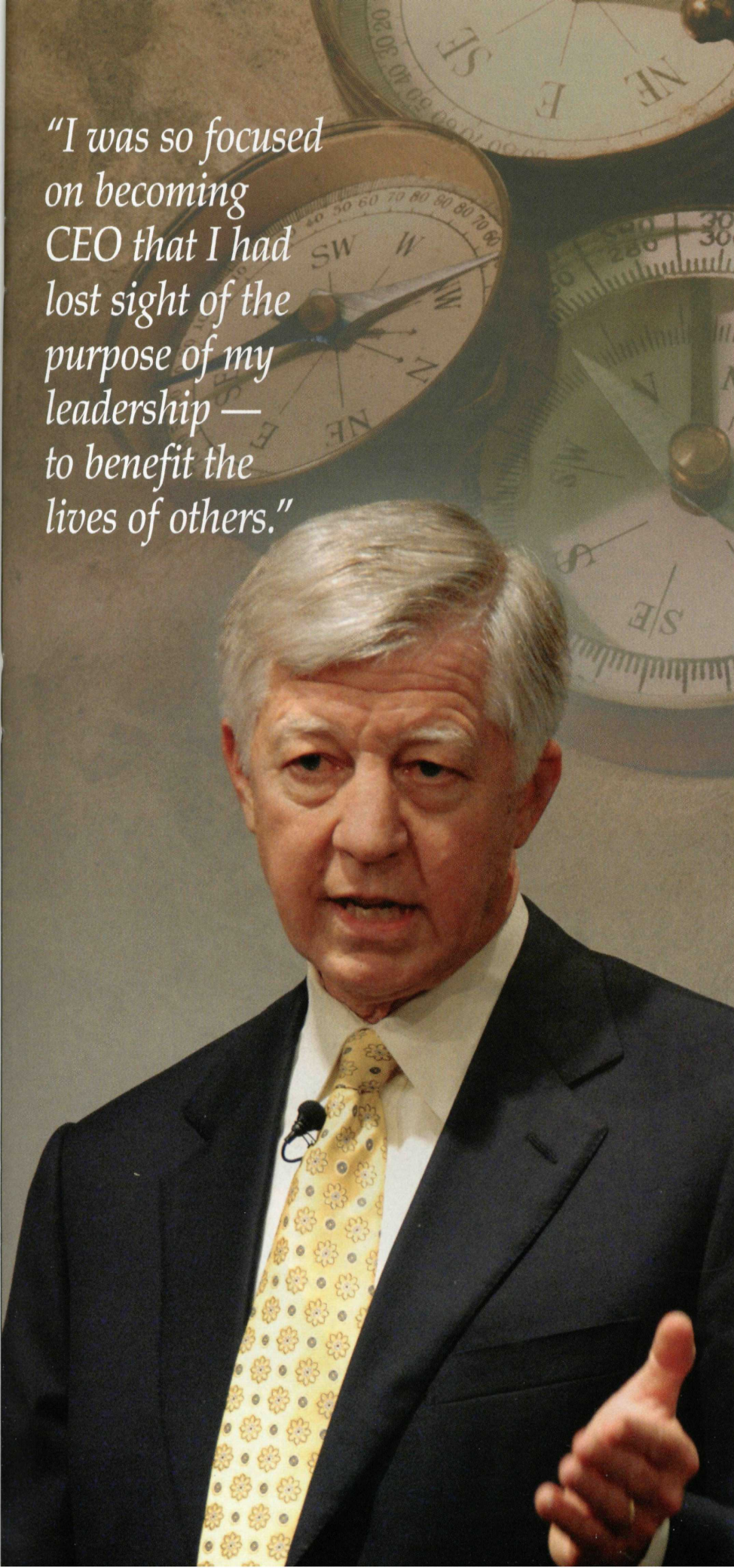
### Transformation from 'I' to 'We'

I experienced a series of crucibles that ultimately transformed my approach to leadership. From my earliest days my father encouraged me to become a leader. ... When I wasn't chosen for high school leadership roles, I ran for elected office and was disappointed not to win. Discouraged, I went off to Georgia Tech so I could have a

**BILL GEORGE**, IE 64, is the former chief executive and chairman of the board of Medtronic, the world's leading medical technology company. Under his leadership, Medtronic's market capitalization grew from \$1.1 billion to \$60 billion, averaging 35 percent a year. A professor of management practice at Harvard Business School and the best-selling author of "Authentic Leadership," George is frequently asked for his insights. George's latest best-seller, "True North," excerpted here, is hailed by The New York Times as "one of the most important books on leadership to come along in years. It is far more reality-based than the theories peddled by the bulk of management pundits."







*"I was so focused on becoming CEO that I had lost sight of the purpose of my leadership — to benefit the lives of others."*

fresh start where no one knew me. ... I learned the hard way that I couldn't escape my past unless I changed myself in the present. I ran for office in my college fraternity six times and lost every time. Clearly, I had not learned why others did not want to follow me.

At this point a group of seniors took me under their wing and gave me some sound advice. "Bill, you have a lot of ability, but you come across as more interested in getting ahead than you are in helping other people. No wonder no one wants to follow your lead." Although devastated by this feedback, I took their advice to heart. I talked to my peers about what I was doing wrong and how I could change. Eventually, the changes took hold, and I was chosen for more leadership positions than I could take on. Most rewarding of all was being selected as fraternity president by the same people who had rejected me earlier.

In my mid-20s I experienced the most significant crucibles of my life. An only child, I was extremely close to my mother, who gave me unconditional love. When she died suddenly of cancer and a heart attack, I went into a period of deep reflection about the purpose of my life. Eighteen months later, as I was only three weeks away from being married, my fiancée died suddenly from a malignant brain tumor. Her death came as an incredible shock. Once again, I felt all alone in the world. Had it not been for the power of prayer and the support of my friends, I might not have recovered.

Not long after that, I had the blessing of meeting my future wife, Penny. She was very empathetic about my experiences, and a year later we were married. I can honestly say that she has been the best thing that ever happened to me. In addition to being a great wife and mother, Penny is an outstanding counselor to me.

Even so, I still wasn't out of the woods. I saw myself on an unbroken sprint to the top of a major corpor- >>>



ation. By age 30, I was president of Litton Microwave, the pioneer and leader in the emerging U.S. consumer microwave oven industry. For the next five years I led our team in creating the field of consumer microwave cooking. Toward the end of that time, the board of directors of our parent company, Litton Industries, visited our rapidly growing division. I was proud to explain how we had grown at 55 percent per year and had become the largest profit contributor in the corporation. Sailing high, I was pulled aside after the meeting by the corporate CEO, who offered some stern advice. "Young man, you're still in the honeymoon phase here. You don't have a clue what business is all about. Wait until you have to turn around failing businesses."

His advice really angered me. I thought he was the one who didn't have a clue about how to create growth businesses. Was I ever wrong. A year later I left Litton and joined Honeywell, with the opportunity to lead a global corporation. As I was asked to turn around one business after another, I recognized that Litton's CEO had been absolutely right. During my fourth major turnaround, I finally looked at myself in the mirror and admitted this was not how I wanted to spend my life.

I was in the midst of a severe crucible but had been too busy to recognize it. I finally faced the reality that my unhappiness at work was harming my marriage, my relationship to our sons and my close friendships. Maybe my destiny was not to be CEO of Honeywell after all or maybe I would not enjoy the job if I got it.

At that point I talked with my wife, my best friend, and a group of men I met with each week and asked them all for candid feedback. They had seen what was happening and were pleased I was finally facing it. I was so focused on becoming CEO that I had lost sight of the purpose of my leadership — to benefit the lives of others.



*"By discovering the purpose of my leadership in serving patients and empowering employees, I was finally on the right side of the transformation from 'I' to 'we.'"*



For all my earlier work, I had not fully made the transition from "I" to "we."

Three times I had turned down the opportunity to become president and CEO of Medtronic, the creator of the pacemaker, because I did not believe the company suited my ambition to lead a large company. Back then, it was only one-third the size of the sector I was leading at Honeywell. Facing up to my need for a renewed sense of purpose, I called Medtronic back to find out if the position was still open.

Several months later, after conversations about the Medtronic mission with founder Earl Bakken, I joined Medtronic as president. My 13 years there became the best professional experience of my life. By embracing the Medtronic mission of restoring people to full life and health, and discovering the purpose of my leadership in serving patients and empowering 30,000 employees, I was finally on the right side of the transformation from "I" to "we."

### Professional Support Network

Many leaders develop professional peer networks both within and outside their organizations to consult with them about important issues and to provide counsel and guidance. EBay's (John) Donahoe noted, "You can learn a little bit from a lot of people." Rob Chess, chairman of Nektar Therapeutics, commented, "If someone does something very well, I try to understand how I can apply it to my work." Some leaders mentioned the value of their involvement with executive roundtable groups and professional organizations like the Young Presidents' Organization. YPO provides a forum where members can talk openly about their challenges and a network to exchange ideas and learn from each other.

Having a peer support structure within your organization can be invaluable, because colleagues may be facing comparable experiences, have insights about things you do not see or be in a

position to offer you real-time feedback on your leadership. Because being on top of an organization can be lonely and isolating, some leaders use subordinates as an advisory network, even in the most difficult business circumstances.

CEOs look to members of their board of directors for advice at crucial points, so why not have your own personal board of directors? Your board might include several highly trusted personal and professional advisers, people you respect for their professional expertise, insights and wisdom and for their commitment to your personal well-being. Your team can also include close friends, mentors, your lawyer, financial planner or personal coach. You can meet with them on a regular basis or when you are facing especially difficult decisions.

Your journey to leadership is likely to take unexpected turns. Life is full of challenging situations, including ethical dilemmas, midcourse career changes or burnout, seemingly intractable interpersonal challenges with colleagues, marriage and family issues, failures and loneliness. At times you may feel you are losing your way or have gotten off the course of your True North.

Getting back on track alone is very difficult. That is when you most need your support team. It is important to build your team long before there is a crisis in your life.

### Staying Grounded

Taking sabbaticals is (one) way in which authentic leaders ground themselves. John Donahoe's sabbatical lasted three months. Brenda Barnes was away from the workplace for several years to focus on her family before she returned to the corporate world as president of Sara Lee. Many other leaders, such as Joe Rogers Jr. (IM 68), also took sabbaticals.

Rogers did not take long to become CEO. At 26 he was put in charge of Waffle House, a chain of breakfast

restaurants owned by his family. After early success in his new role, relationships with his people grew strained as he tried to change the firm's direction. He explained, "By the end of the 1970s, I was fed up. A lot of people were opposing what I was trying to get done. Finally, I just threw up my hands and asked myself, 'Do I want to keep beating my head against this wall?'"

Rogers took a six-month sabbatical and went to Solana Beach outside San Diego. He lived on the beach for six months, ran every day and learned to surf while he thought about his options. "Finally, I said to myself, 'Is this really my people's fault? Maybe I'm the problem. I may have the right ideas, but I'm not providing the right leadership.'"

He returned to the business and unveiled a new corporate strategy. He told his team, "We're stopping the growth and committing to quality first. It's no longer bigger and better. It's better before bigger. If we don't get better, we haven't earned the right to get bigger." Rogers' organization quickly solidified around the new strategy as Waffle House was transformed into a success story that has been sustained for 30 years.

### What Will Your Legacy Be?

Why not take the opportunity to think about that question right now, while you are still writing your life story? Just as it is never too late to lead, it is never too late to make a difference in the world and to leave a legacy for those who come along after you. But only you can answer that question. When you know your answer, you will also recognize why leadership is so fulfilling. **GT**

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# World Record Triathlete

Flip Lyle holds the Guinness prize for grueling contests

By Karen Hill

What does it take to get into the Guinness World Records? You could trade your rubber ducky for 76 rattlesnakes — most rattlesnakes sharing bath. You could induce headaches with fruit — most watermelons crushed by forehead.

Or you could try to outperform James Arthur "Flip" Lyle, IM 67, of El Paso, Texas. He holds the Guinness world record for most triathlons completed, at 250. Since he sent in the application, Lyle, 62, has completed nine more.

"It's kinda fun, kinda exciting," Lyle says of the letter he received from Guinness, dated July 31. "That and a dollar these days might buy you a cup of coffee."

Lyle, who came to Georgia Tech on a football scholarship, playing right guard, was named to El Paso's Athletic Hall of Fame in 2005. He also was named El Paso's "Best Senior Athlete" by *Southwest Senior* magazine. He's known in triathlon and duathlon circles as "Captain America," always competing in red, white and blue.

When Lyle competes, "you want to stay out of his way. He looks like a former Georgia Tech linebacker turned triathlete," says Mike Greer, former president of USA Triathlons and No. 2 on the most triathlons completed list. "I keep telling him, 'I'm going to catch you,' but I'm not."

Lyle says he didn't begin competing in triathlons — composed of running, swimming and biking — with an eye toward the Guinness record. Rather, a friend and fellow runner simply wondered aloud about how many races they'd completed.

The final tallies surprised them, Lyle says, and along bubbled up the idea of alerting Guinness.

Including duathlons — running and biking competitions — Lyle says he has completed 347 multisport events. He can't figure total mileage because that varies from race to race.

Believe it or not, Lyle says, searching for a way to ease injuries led him to multisport competition.

"I was a runner for years and years, and I found that just running, I was injured quite a bit. Sometime before my 40th birthday, I got a real good bicycle and thought, 'Gosh, I'll just start riding. I've always been a swimmer; I swam at Tech and in high school,'" Lyle says.

"At about that juncture in time, triathlons were starting to blossom — it's a new sport, only been around since 1978. I thought, 'I'm doing all this training, I might as well give this a go.'"

Nor does he anticipate stopping anytime soon.

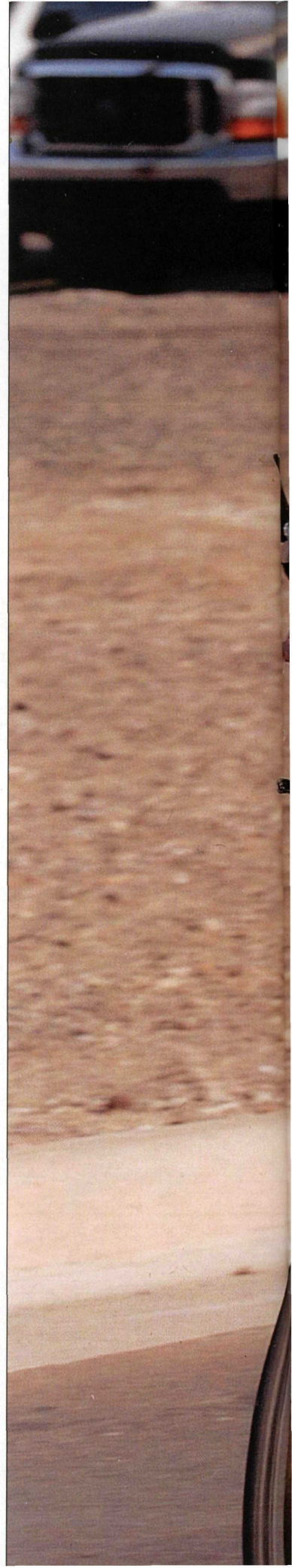
"I really think that engaging in multisport training and activities, using different muscles in different ways, doesn't subject your body to all that pounding that running does. In swimming, you have to try very hard to hurt yourself and cycling is a grand sport. You don't hurt yourself unless you fall off," Lyle says.

Lyle, who owns a commercial and industrial real estate business, sandwiches his training around work.

"Typically, I try to ride 120 to 150 miles a week on the bike, swim about 10,000 meters and run in excess of 20 miles," he says.

Lyle says the benefits of athletic competition have spilled into other areas of his life.

"Taking care of yourself makes you a more efficient person in your business, in your relationships — with your family, with other people." **GT**









>>>INTERVIEW

# JUDITH CA

Portrait Photo: Gary Meek  
Glacier Photo: Paul Souders/Corbis



# CURRY

## Meteoric Rise

Two years after Hurricane Katrina, Judith Curry remains in the eye of the global warming media storm

By Kimberly Link-Wills

*Judith Curry, chair of the Georgia Tech School of Earth and Atmospheric Sciences, co-authored a 2005 paper on tropical storms and climate change that generated a whirlwind of attention in the wake of the Gulf Coast devastation. Curry, who earned a bachelor's degree in geography at Northern Illinois University and a doctorate in geophysical science at the University of Chicago, is the recipient of >>>*





*the American Meteorological Society's Henry G. Houghton Research Award and the National Science Foundation's Presidential Young Investigator Award. All the education, research and awards didn't prepare her for the onslaught of publicity brought on by her paper, "Changes in Tropical Cyclone Number, Duration and Intensity in a Warming Environment," published in Science just three weeks after Hurricane Katrina hit and as Hurricane Rita was intensifying in the Gulf of Mexico.*

There's no silver bullet solution. You can imagine all sorts of lousy policies that could be put into place that would cost a lot of money and not help the environment.

**Why does there continue to be debate about global warming?**

There's always some scientific uncertainty. That's what keeps scientists going. If this were all sewn up, people like me would not be conducting research on this topic.

But I think the overwhelming scientific evidence is that the Earth is warming and that humans are contributing to a significant part of it. The latest survey I heard about found that three-quarters of the people believed global warming was for real and a serious issue. In the last year and a half or so, I think there's been a big turn-around in public perception and policymakers' perception.

**What do you think should be done to combat global warming?**

There's no silver bullet solution. You can imagine all

sorts of lousy policies that could be put into place that would cost a lot of money and not help the environment. There's a lot of debate over how we should go about addressing this issue and that's healthy debate. We need to better understand the risks that we're facing and start developing different plans and options so we can then begin to evaluate which ones are the most economically feasible and politically viable. I don't advocate any specific policy solution, although I have my own opinions like everybody else.

We wasted at least 10 years just arguing about whether global warming was real or not. That was the part that was pointless. Now that we are at the stage of deliberating what we are going to do about it, we shouldn't rush into anything without very careful consideration. But we need to start the

assessment and planning process now.

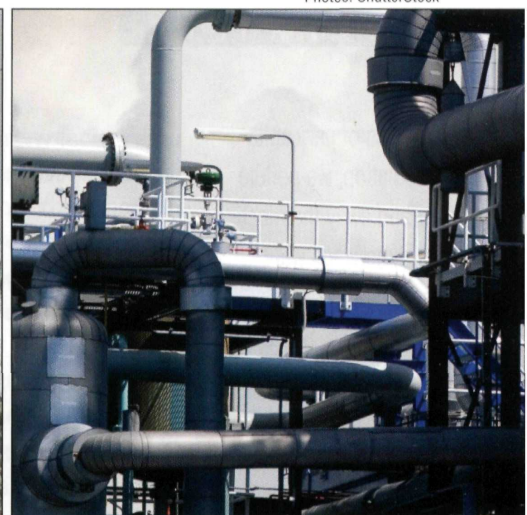
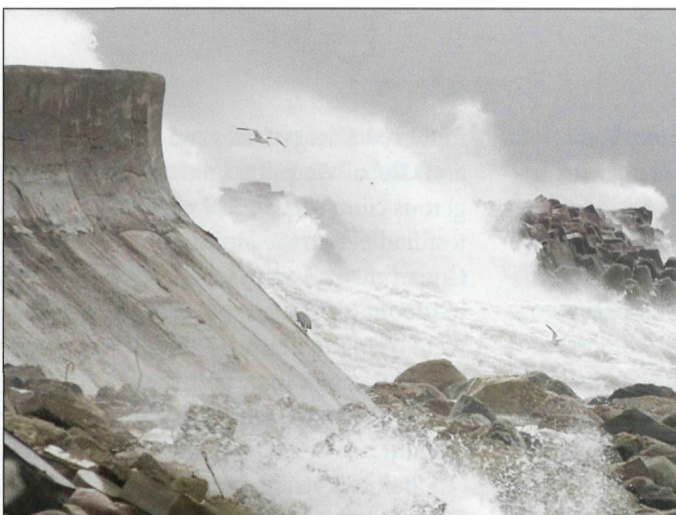
**Where on the planet is the most proof that global warming exists?**

The greatest warming is in the Arctic. We've seen a massive decrease in the Arctic sea ice and also rapid melting of Greenland. It's been very noticeable, particularly over the past 10 to 20 years. We could by 2050 be seeing an ice-free Arctic Ocean in the summer.

**What would it mean for the planet if the Arctic sea ice melted in the summer?**

Planetary warming would accelerate more rapidly since the loss of the sea ice would reduce the amount of the sun's radiation that is reflected back to space. It would have a big impact on the wildlife in the Arctic, not just the fish, but polar bears and other animals that rely on the fish. It's been very difficult for the Inuit, who live off the land, to adapt to these very rapid changes. The Inuit use sea ice as a hunting and fishing platform. As the sea ice recedes, they're having to use high technology, with fancier boats and GPS, to do their fishing and hunting.





The prospect of an ice-free Arctic Ocean does open up the possibility of shipping, say, from Japan to Europe across the Arctic Ocean. While this opens up opportunities for commerce, it also raises some interesting national security issues.

I started working on the Arctic in the late 1970s. I was trying to find a topic that wasn't too crowded with other scientists working in it. At the time, there were very few scientists looking at the climate or the atmosphere of the Arctic. No one was particularly worried about it.

**The Science article you published in 2005 with Peter Webster on tropical cyclones was focused on an entirely different part of the world.**

**When did you shift direction?** I started working in tropical ocean and atmosphere interactions about 15 years ago.

**Are hurricanes becoming fiercer?**

Yes, they're becoming more intense and in the Atlantic they're becoming more numerous overall.

**Is that attributable to global warming?**

Some of it is natural variability, some of it is global warming. Scientists are still arguing about this but it's impossible to imagine that if you heat the tropical oceans up a degree or two that you're not going to influence hurricanes.

You'll see year-to-year variations since there are natural cycles on top of global warming. It's not just a simple linear trend upward. But overall, it's headed upward in terms of intensity and in the north Atlantic in terms of increasing numbers of hurricanes.

**The study became a hot button issue after Hurricane Katrina struck the Gulf Coast, didn't it?**

The timing of the publication of this paper was uncanny. We had submitted the paper in May 2005 and it was published just a few weeks after Hurricane Katrina struck. When our paper came out, Hurricane Rita was spinning up in the gulf. This really focused a huge amount of attention on that paper. We showed up everywhere.

I think Hurricane Katrina, even though you can't attribute it to global warming,

was really a wake-up call that the effects of global warming could potentially be very serious.

The whole hurricane issue captured people's attention more so than the melting of the Arctic. It was more immediate and everybody felt it, whereas up in the Arctic you say, 'What does that mean to the average person in their day-to-day life?' Not a lot, but every citizen in the lower 48 felt the impact [of Katrina] at the gas pumps. And in a way, it was more of an emotional impact — there were people dying — even though what's going on up in the Arctic is more significant from a climatic standpoint.

Again, you can't attribute one hurricane to global warming. But >>>

*You can't attribute one hurricane to global warming. But with global warming, you would expect more intense hurricanes.*





In terms of per capita population, we pollute far and away the most. ... Americans want their conveniences and luxuries. So do I. Clean energy generation is a big part of the solution, but we can do a lot to increase energy efficiency. You can do a lot for energy conservation.

with global warming, you would expect more intense hurricanes.

## Did we learn lessons from Katrina that we can carry forward?

We should have. The federal government is being slow. New Orleans is not ready for another hurricane. We haven't seen the kind of risk assessments of all of our coastal cities that we need. A few of the states have been pretty proactive, Florida and North Carolina in particular, in terms of trying to get their states ready for these hurricanes. But a lot of the states aren't ready and the federal government just hasn't been doing what it should be doing.

## Are you being invited to speak more at conferences?

We get so many invitations it's unbelievable, a number of congressional hearings and everything from advocacy groups to insurance companies to universities, both in this country and in Europe. I just did one fairly recently in Norway. I testified before the House Select Com-

mittee on Energy Independence and Global Warming on dangerous climate change. I also testified before the House Government Reform Committee about a year ago, when they were trying to figure out if this is an important issue and if so why we aren't hearing more about it.

Before Katrina, I was a typical "ivory tower" scientist working with students, doing research, publishing papers. Then our paper hit and things changed big time for me. There was an initial media flurry and we thought, "We've had our 15 minutes," but this has just kept going for two years.

I have come to realize that scientists need to step out of the ivory tower and become more active and effective in working with the public and policymakers on relevant issues related to the environment and the risks we are facing from climate change and natural hazards.

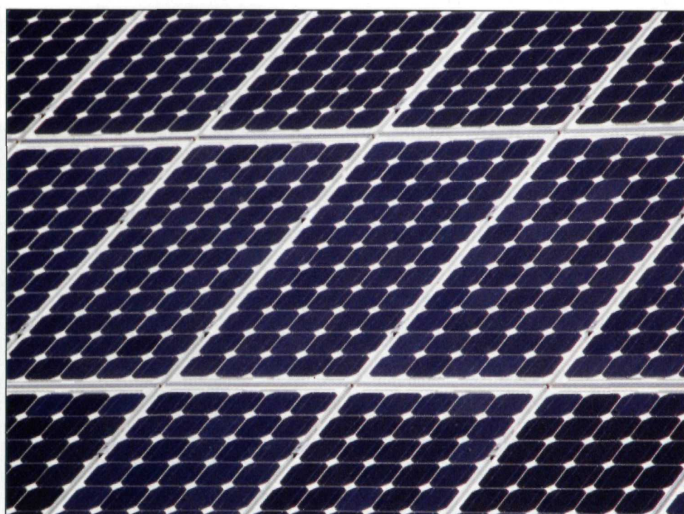
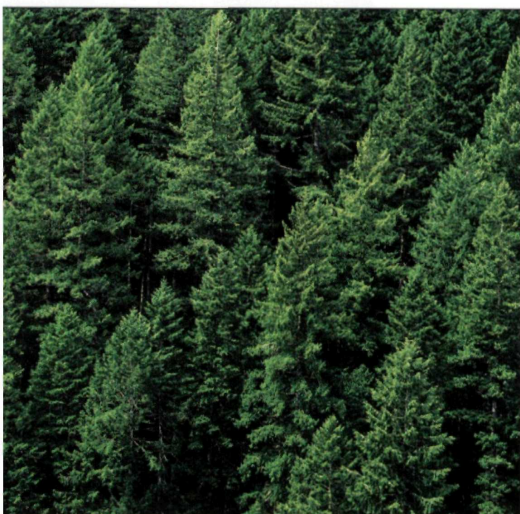
Because Earth and Atmospheric Sciences does so many relevant things about climate and weather disasters, water and air pollution, earthquakes

and volcanoes, we're trying to prepare our faculty and students to be more effective in dealing with the media and the public arena. The media coverage has its pros and cons. While there are some outstanding science journalists that we have been privileged to interact with, a number of them were merely looking for something to sensationalize and we often felt "burned" by these interactions.

But the media attention brought a lot of publicity to Georgia Tech, and I think our paper did make a difference in terms of helping raise the public perception about global warming.

## Did the publicity bring you more students?

We've seen a big boost in the past two years in the enrollment in many of our classes from students majoring in a variety of different fields. Our course Climate and Global Change had an order of magnitude increase from fall 2005 to fall 2006. Students tend to be idealistic and want to feel like they can make a difference.



Photos: Portrait-Gary Meek; Others-Shutterstock



Back in the 1970s when I was a student it was political activism related to the Vietnam War. Now we're seeing a lot of that same energy channeled into environmental issues. There's a lot of student interest in green campus initiatives.

Georgia Tech has been a university leader on the issue of sustainability, energy and the environment. Georgia Tech has been building green buildings and has plans to increase its use of renewable energy, restore ecosystem functioning on campus, reduce the number of cars on the campus and make walking and cycling more appealing and convenient.

Students and faculty in the School of Earth and Atmospheric Sciences should be among the most environmentally conscious people on campus. I am in the process of figuring out how to effectively implement practices that will reduce the school's use of energy, particularly for heating and air conditioning and lighting, increase recycling and reduce material use, such as paper.

### **How have we contributed to global warming and what do we do to stop it?**

We contribute through the emission of greenhouse gases by burning fossil fuels such as gas, oil and coal.

Basically, we need to slow down the rate of increase of greenhouse gases in the atmosphere. There are a lot of new technologies and ideas that are on the table and Georgia Tech is at the forefront of developing some of these technologies, including biofuels and solar power. It is important for the U.S. to clean up its act because we caused a lot of the problem and we're also the society that has the resources and the technological know-how to actually deal with these issues. We need to be out front on this, but China and India are rapidly overtaking us as the chief polluters, so we need to work with those countries to help them implement cleaner energy technologies.

### **What is China doing wrong?**

They're burning coal. They are poisoning their environment —

their air, their water, their soil. There are major concerns about the Olympics since the air quality in Beijing is so terrible. They're not going to be able to grow food or drink water at some point.

The solution is don't burn the dirty coal. But that's a tough one because China has so much coal and the coal that they have is the dirtiest version. We need to help them, otherwise we're all going to pay the price associated with global warming.

In South Asia, they had big floods this summer. My colleague, Peter Webster, does flood forecasting for Bangladesh and he predicted the Brahmaputra River flood about 10 days in advance. Five days before, they evacuated the >>>

We need to ... stop subsidizing the fossil fuels and start providing incentives for clean energy. We need to change how we do things. But I'm optimistic that we can do it. Finally, we need a cultural shift toward responsible environmental stewardship.





I have come to realize that scientists need to step out of the ivory tower and become more active and effective in working with the public and policy-makers on relevant issues related to the environment and the risks we are facing from climate change and natural hazards.

people to high ground and there was a minimal loss of life, maybe 100 people.

But in India, they had one day warning and the flood killed thousands. The population is so dense that it's hard to evacuate everybody.

South Asia is very vulnerable to sea level rise, hurricane disasters, flooding from the monsoons, all of which are projected to become worse with global warming.

**The United States remains the planet's bad guy polluter?**

In terms of per capita population, we pollute far and away the most. Even in Europe there's very little air conditioning. They don't have clothes dryers. They don't have enormous refrigerators. They don't have three TVs. They're just not addicted to energy in the way that we are. In Europe there's a lot more rail transportation than there is here. And they drive much smaller cars.

**You're not going to get Americans to give up their dryers, air conditioners and TVs.**

No, Americans want their conveniences and luxuries. So do I. Clean energy generation is a big part of the solution, but we can do a lot to increase energy efficiency. You can do a lot for energy conservation, just doing some sensible things that you don't even notice in terms of your lifestyle.

**What are things that we can do that we wouldn't even notice?**

Pay attention to energy efficiency ratings when you buy appliances and gasoline mileage ratings when you buy a car. Make every effort to recycle. Use compact fluorescent lightbulbs and turn off the lights when you leave a room. Keep your thermostat in the summertime set above 74 and turn the thermostat down by two degrees in winter. Rethink where you live relative to work and make better use of public transportation. Wash your clothes in cold water rather than hot. Such actions can make a significant difference and only require a little of our attention but don't diminish our standard of living.

I live half a mile away from the Georgia Tech campus.

**What do you drive?**

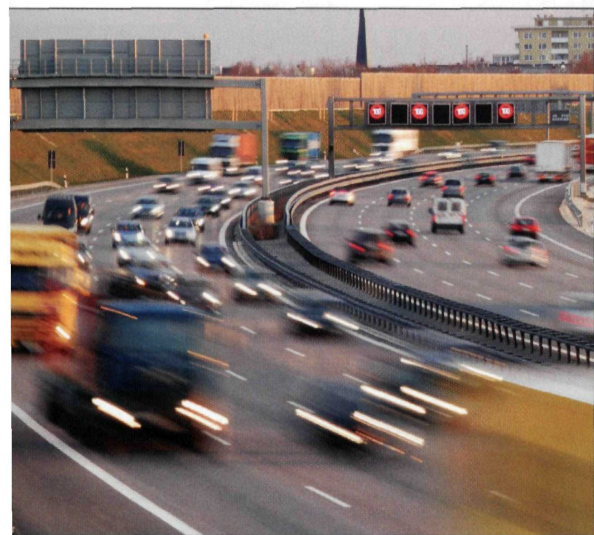
I drive a Prius. The Prius hybrid is fascinating to drive in terms of seeing the interplay between the battery and the engine and seeing exactly what mileage you're getting. I'm getting between 45 and 48 miles per gallon, both city and highway.

**Are you optimistic about our ability to make changes?**

We need to get the right incentives in place. Stop subsidizing the fossil fuels and start providing incentives for clean energy. We need to change how we do things. But I'm optimistic that we can do it.

Finally, we need a cultural shift toward responsible environmental stewardship.

I also see a big role for Georgia Tech in the general area of energy, the environment and sustainability, in terms of developing new technologies and bringing those technologies to the marketplace and in developing policy and management solutions. **GT**





# Tech Helps Forecast Bangladesh Flooding

By David Terraso

Scientists at Georgia Tech and the National Center for Atmospheric Research designed a forecasting system that forewarned thousands of Bangladeshis of possible flooding in August.

Bangladesh is one of the most vulnerable regions on Earth to floods. Rising waters in August left dozens of people dead and several million marooned or displaced.

Peter Webster, a professor in Georgia Tech's School of Earth and Atmospheric Sciences, is the principal investigator of an initiative to improve flood and precipitation warnings in the low-lying nation.

The one- to 10-day forecasts are delivered directly, when possible, to more than 100,000 people living in floodplains of the Brahmaputra and Ganges rivers. They will be distributed more widely in coming years.

"Our goal is that long-range flood forecasts, for the first time, will consistently reach many rural individuals in Bangladesh who are in jeopardy of losing their homes, businesses and possibly their lives," says NCAR scientist Thomas Hopson, who helped develop the forecasting system.

The forecasting system predicted the August floods several days in advance. The system uses a combination of weather forecast models, satellite observations, river gauges and new hydrologic modeling techniques.

Webster and Hopson have provided forecasts to Bangladeshi agencies since 2003, but the forecasts often have not reached rural regions, where many residents lack radios and even electricity. This year, the Thailand-based nonprofit Asia Disaster Preparedness

Center has established a network of governmental and non-governmental organiza-

tions, as well as volunteers, to distribute the forecasts directly to people in five districts along the Brahmaputra and Ganges, including impoverished families living on islands known as river chars.

Almost every other year in recent decades, the Brahmaputra and Ganges rivers have flooded for periods ranging from a few days to a month or more, often with devastating results for local residents.

Residents of the largely impoverished districts in the forecast area have said that advance notice of floods could help them ward off some of the worst impacts of rising waters. If they had sufficient warning, they could harvest at least a portion of their ripening crops, move some livestock to safety, encircle fish ponds with nets to prevent fish from escaping and stock food and other supplies.

The European Centre for Medium-Range Weather Forecasts provides data and weather forecasts, which are fed into hydrological models of the Ganges and Brahmaputra river basins. The system also incorporates estimates of precipitation from two satellite-based systems developed at the NASA Goddard Space Flight Center and NOAA Climate Prediction Center, along with discharge measurements of rivers in Bangladesh.

Hopson, Webster and Georgia Tech scientists Carlos Hoyos and Hai-Ru Chang have worked to create forecasts that go out more than 10 days, thereby giving residents additional time to prepare for floods. Over the next year or two, increasing numbers of Bangladeshis will begin to receive 20-day forecasts, followed by one- to six-month seasonal forecasts.

The team also will study the feasibility of applying its forecasting technology and methods to other vulnerable countries, such as Cambodia and Vietnam. "We feel that the prediction modules we have developed for Bangladesh are templates for flood forecasting in developing nations with limited infrastructure and resources," Webster says.



Photos: Shutterstock



# Racing for Green

Susan Davis directs Coca-Cola's environmental initiatives for Beijing Olympics

By Leslie Overman

Susan M. Davis is training for the Beijing Olympics. She's not an athlete but is doing medalist-worthy work on water pollution issues in China.

Davis, ABIOL 91, is the national water strategist and senior director of development at CARE, one of the world's leading humanitarian organizations fighting global poverty. Over the next year, she'll be spending most her time not at the nonprofit's Atlanta headquarters but in China. She is on loan to Coca-Cola to help manage a water program associated with the company's sponsorship of the 2008 Beijing Olympic Games.

"The Chinese government is very interested in doing something about the environment," Davis says. "They're recognizing

China. In addition to water stewardship projects, Coca-Cola also will be "trying to incorporate, wherever they can, greener methods" in Olympic sponsorship activities, Davis says, from organizing a fleet of delivery trucks that meets high emission standards to potentially running mobile Coca-Cola beverage carts at outdoor venues on solar power.

"Part of what I'll be doing is helping not necessarily come up with all of those ideas ... but I'm going to help them tell the story," Davis says. "I'll compile all of this so that they can take these messages and share them with other Coca-Cola markets, for example, or future Coca-Cola Olympic project groups."

Davis also will help relate the

August, just in time for Coca-Cola's one-year countdown to the Olympic Games.

"It's fun to think about trying to carry this green theme through future Olympics. The next ones are in Vancouver, London and Russia. Those are nice places to visit if they want me to come," Davis says with a sly smile. "Don't tell my boss."

While a student at Georgia Tech, Davis made history as the first official female Buzz. As an alumna, she has served as an Alumni Association trustee and a member of the Georgia Tech Women's Advisory Committee. She also helped organize the Alumni Association's student mentoring program. In March, Davis was presented the Outstanding

satisfied. "I really wanted to do something else," Davis says. "I wanted to do something where I felt more connected and that I really was doing something that mattered."

Davis made a gutsy move — she dropped everything and joined the Peace Corps.

She received an assignment writing grant proposals for municipalities and a nonprofit organization in Poland. Her home away from home was a two-bedroom apartment with a refrigerator and hardwood floors, her host family a "sweet grandmother who overfed me," she says. Each morning, she dressed in a suit and rode a bus to work.

"Usually, you think of the Peace Corps and you think about

that with all of the country's development, there have been some negative environmental side effects, so I think it's part of their commitment that they're encouraging the Olympic sponsors to do something, whatever it is, for a green Olympics."

As Coca-Cola's Green Olympics project director, Davis will spend most of her time organizing the beverage company's philanthropic initiative to get safe water to people in rural areas of

story to the Beijing Olympic Organizing Committee. "The government wants to be able to say what's happening that's green," she says. "Somebody has to be responsible for collecting all of Coca-Cola's green messages and sharing them with the government, the people who come to watch the events and the athletes. That will be interesting and, of course, all that has to happen in less than a year."

Davis arrived in Beijing in

Young Alumna Award at the Alumni Association's Gold & White Honors ceremony.

After college, Davis began working as an environmental consultant. She later earned her master's degree in public health from The George Washington University while working in human health risk assessment. "I was working my butt off ... and doing some really interesting stuff," she says.

She also was climbing the corporate ladder, but she wasn't

a mud hut in Africa or living in a rural area in Guatemala and not having running water," Davis says. "Poland is pretty much a developed country. But they definitely had environmental issues, which is why they assigned me there."

After her stint in the Peace Corps, Davis volunteered with WaterPartners International, an organization that focuses on water and sanitation in developing countries. She worked her way into a paid position with the non-







Photos: Portrait, Gary Meek;  
China Pollution, Shutterstock

profit and later joined CARE as a fundraiser.

"I started as a generalist and happened to keep talking to people about water, because that was my expertise and that's what I knew about," Davis says. "Then I was able to create a more formal role where I get to focus on water and sanitation."

As national water strategist for CARE, Davis says, "The whole goal is to bring in more resources for water, because, at least in

unsafe water. Or if they have to go fetch water, like most girls do in some countries, they don't have time to go to school. Water just underlies everything else you do."

On a recent trip to Kenya, where CARE is working on water projects, Davis saw some regions were experiencing flooding while others were dealing with a drought, much like the United States. The difference, Davis says, is in each country's ability to cope.

"When you're really poor, you can't withstand the shocks and you have nowhere else to go," she says. "If you're walking, even if it's just a few minutes, to get some water from a hole in the ground and that dries up, where do you go? Then you have to start sharing another water hole with



my mind, it underlies all development, everything we're trying to do around poverty. You can't do farming if you don't have water. If you've got HIV/AIDS, even if you have a pill that's a miracle cure, you're drinking that with unsafe water. Kids can't go to school if they're sick from having

people from other villages and then there's conflict that develops.

"So you start thinking, 'Wow, we in the U.S. have no idea what it's like in other countries.' People say, 'Oh, we have water problems here in Atlanta.' But is that just because you can't water your lawn every day?"

"I have so many friends who come and say, 'I want to do something that matters,'" Davis says. "I tell them, 'Volunteer. A lot of great groups need you.'" **GT**





## Georgia Tech Alumni Association Awards Call for Nominations

*Each year the Georgia Tech Alumni Association recognizes alumni for exemplary service to Tech, the community and the world. Nominations are being accepted through October 26 for the Outstanding Young Alumnus and Dean Griffin Community Service awards.*

### Dean Griffin Community Service Award

*Recognizes a Georgia Tech alumnus who has performed exemplary community service work. The four primary considerations are:*

- Service in a long-term volunteer capacity
- Impact on the quality of life of others
- Demonstrated leadership and creative ability to deal with societal problem proactively
- Setting an example for others to follow

### Outstanding Young Alumnus Award

*Honors a Georgia Tech young alumnus who has not yet reached the age of forty and whose graduation year is within 20 years of February 7, 2008. This award recognizes one who has demonstrated outstanding achievement in his/her profession and significant service to Georgia Tech and its Alumni Association. The three primary considerations are:*

- Service to Georgia Tech and its Alumni Association
- Service to the general welfare of their community
- Service to their profession

Nomination forms available online at [www.gtalumni.org/awards](http://www.gtalumni.org/awards)



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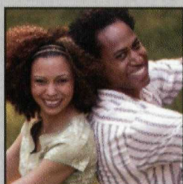
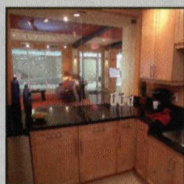
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### BALLET FOLKLORICO DE MEXICO

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### TURTLE ISLAND STRING QUARTET

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September 2007

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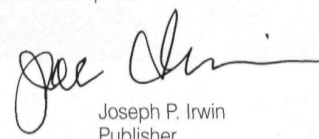
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I certify that the statements made by me above are  
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Joseph P. Irwin  
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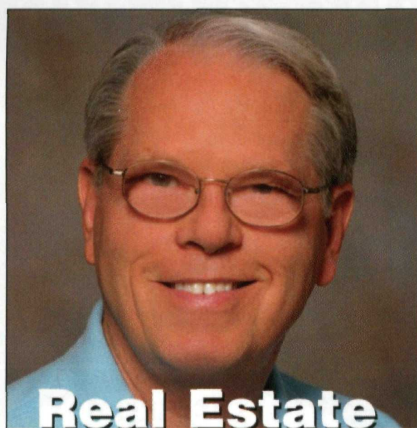
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# 25 Years Ago

Ground was broken for the \$5.1 million Advanced Technology Development Center (below) at 10th and Greenfield streets in the fall of 1982. The ATDC was jointly created by Gov. George Busbee and the General Assembly in 1980 as a catalyst for attracting and fostering high-technology growth. Busbee and Tech President J.M. Pettit, who had worked hard promoting the facility, both turned spades of dirt during the ceremony. Now located at Technology Square, ATDC has been acclaimed as a national role model incubator for high-tech startup companies.

# 50 Years Ago

The Alumni Roll Call observed its 10th anniversary with a bang. The percentage of participation in the 1957-58 annual giving program was 41 percent — a national record, according to the American Alumni Council, the organization that kept up with such figures. It was the first time in the history of higher education that more than 40 percent of the alumni of a state-supported school responded to an annual fund drive. By comparison, Ohio State had 26.5 percent, California 9.6 percent and Michigan 8.3 percent.

# 75 Years Ago

In the depth of the Great Depression, the Georgia Tech Club of Philadelphia, led by C.L. Jordan, EE 15, advocated that Tech clubs across the country help fellow alumni secure employment. In the May 1932 alumni magazine, Jordan said the Philadelphia club served as “sort of a clearinghouse” to help alumni find jobs. An Alumni Association editorial urged its clubs to make their secretaries the “clearinghouse” contact members would notify when out of work and whenever there was an available job. GT





# Mark Allen

CardioMEMS co-founder adds senior vice provost to credentials

Mark Allen is a Regents professor. He holds the title of J.M. Pettit professor in microelectronics. Allen is the co-founder of CardioMEMS, a biotechnology company and graduate of the Advanced Technology Development Center. Now he has added senior vice provost for Research and Innovation to his business card.

Allen calls the new role, which he took on in September, an "expansion" of his previous duties.

He's been teaching at Tech since he arrived in 1989 and remains in the classroom. This semester, he's teaching a class in microelectronics processing.

Allen also serves as a consultant to CardioMEMS, which produces

innovative cardiovascular sensors based on microelectromechanical systems technology he developed and is now located in Technology Enterprise Park.

In 2006, the Food and Drug Administration cleared the way for the sale of EndoSure, the first implantable pressure sensor that combines wireless and MEMS technology.

Allen was involved in an earlier startup, Redeon, a pioneer in micro-needle technology, but CardioMEMS marked his first experience commercializing a biocompatible medical device.

As a member of the provost's senior leadership team, Allen will be instrumental in setting the Institute's research and economic development agenda and strategic direction. He will not only manage Tech's \$458 million research portfolio, but also oversee the commercialization of innovation, ensuring that the Institute takes maximum advantage of the intellectual property developed in its research labs.

Allen says he applied for the post for the opportunity to learn

about research being conducted throughout the Institute's colleges. "I was very interested in all the pieces of research. They're going to pay me to learn about them." That's just gravy on top of the fascinating research proposals that already have come across his desk. For now, he has to keep those morsels to himself.

In 1983, Allen earned three bachelor's degrees — in chemistry, chemical engineering and electrical engineering — from the University of Pennsylvania. He earned a master's degree and doctorate in microelectronic materials at MIT. He lists his research interests as micromachining and microsensor and microactuator fabrication.

"I'm excited about the opportunity to serve Georgia Tech in this new capacity and hope to continue the success we have experienced in research and technology transfer," Allen says. "Georgia Tech is already a recognized leader in these areas and I look forward to helping us realize the significant potential for further growth that is vitally important to Tech's future." **GT**

Mark Allen  
Below:  
A clean-room technician holds a CardioMEMS sensor.



Photos: Gary Meek

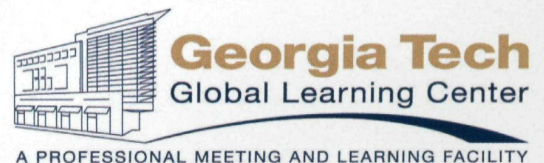


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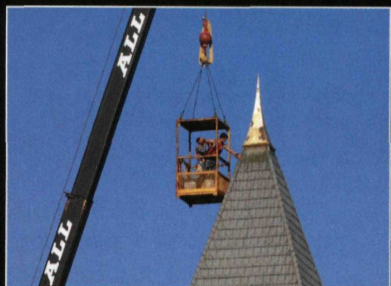
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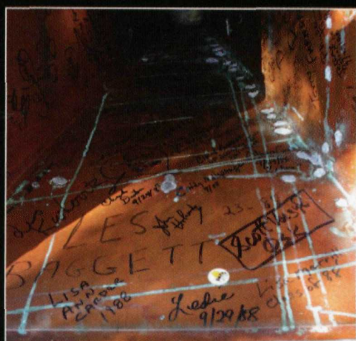
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## Gold-Plated Pinnacle

The Tech Tower's golden crown has a regal new luster. The pinnacle, which has capped the tower for the past 20 years, received a new gold-leaf plating this summer. The removal of the pinnacle took place in July after a 150-foot crane, released from cleanup operations following Hurricane Katrina, provided the means to do the job. When the pinnacle was lifted from its perch, photographer Ethan Trehwitt was on hand to capture a fish-eye view. The tower's apex bore signatures on the inside of some faculty, administrators and students. In 1987, Eugene Clary, GS 32, donated funds to give the tower a new copper roof topped by the gold-plated pinnacle. The refurbished golden crown was returned to its lofty perch in September. **GT**









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