

Inside:

Indonesia tsunami ..... 2  
 Awards & honors ..... 3  
 In Brief ..... 3  
 Campus Events ..... 4



# THE WHISTLE

FACULTY/STAFF NEWSPAPER

Volume 32, Number 24 • July 30, 2007

THE GEORGIA INSTITUTE OF TECHNOLOGY

## CATEA Consumer Network an information resource for online communities

Matt Nagel  
 Institute Communications  
 and Public Affairs

The Center for Assistive Technology and Environmental Access (CATEA), a research unit within the College of Architecture, is giving the disability community and aging population a new tool that helps identify new products, research and services available to them.

CATEA's Consumer Network (CCN) is an online community that shares information about products, prototypes and latest developments in disability and aging-related products.

By joining CCN, members are among the first to preview new developments in disability and aging-related products and provide input to make them more usable and accessible.

"CCN is unique because it is the only consumer network of its kind to include all facets of disability and aging issues," said CATEA researcher Robert Todd. "No one will be left out because they don't fit a 'profile.'"

CATEA researchers also benefit greatly from CCN as they are able to identify CCN members to test new prototypes, products and services in order to improve them through focus groups, field-testing and surveys.

"CCN is a young initiative," said Todd, "but the network has already been responsible for the successful completion of numerous research projects, both private and federally funded."

College of Architecture doctoral student Young Mi Choi used CCN to find subjects for her research on portable wheelchair ramps. The network helped identify potential users from a pool of members. The network also allowed Choi to be more precise in sending out invitations and avoid sending invitations to those who would not qualify to participate in the study.

"CCN allows users to learn more about research that would be helpful to their lives," said Choi. "Most importantly though, by showing interest in becoming a CCN member, it allows them an opportunity to actually take part in developing innovations that

may be able to impact them directly."

Participation in CCN is growing rapidly among consumers, nearly doubling between March and June of 2007.

"Although CCN was developed at Georgia Tech's CATEA, the network is intended for use by all researchers who will abide by its rules and regulations," said Todd. "It is thus a more universal source for disability and aging research than any other in the nation."

According to Todd, CCN accomplishes this broad mission while still maintaining privacy and anonymity for its members. Additionally, membership is free of charge, and members are often compensated for their participation in studies.

CATEA plans to open the network to researchers across the nation during the second half of 2007.

For more information...

**The CATEA Consumer Network**  
[www.catea.org/ccn](http://www.catea.org/ccn)

## Tech ranks as top producer of African-American engineers

Megan McRainey  
 Institute Communications  
 and Public Affairs

Georgia Tech is the top overall producer of African-American engineers in the United States, according to Diverse: Issues in Higher Education magazine's annual college rankings report.

For the 2005-2006 academic year, Georgia Tech was ranked No. 1 in undergraduate degrees in engineering awarded to African-American students with 120 degrees, up from 117 during the 2004-2005 academic year.

Other top-five degree producers at the undergraduate level include North Carolina A&T State University, North Carolina State University at Raleigh, Southern University and A&M College and Florida Agricultural and Mechanical University.

"These rankings represent Georgia Tech's continued efforts to attract and graduate top minority students in engineering," said President Wayne Clough. "Given the growing need in our state and around the nation for talented citizens, we are proud of Tech's role as a national leader in creating and maintaining a supportive educational environment for minority students."

Georgia Tech was also the No. 1 producer of African-American doctoral graduates in engineering with 11 graduates, and No. 2 in engineering master's degrees awarded to African-American students with 28 degrees.

*Degrees continued, page 2*

## Tech police chief hits the highway on a mission and for a cause

Some spend their vacations seeing new places, others in service of the needy. For Georgia Tech Chief of Police Teresa Crocker, it was a bit of both. She spent nearly three weeks on the back of a motorcycle, riding coast-to-coast from Alaska to Florida. She was participating to raise money for charity, but she also had a personal goal: recognition from the Iron Butt Association (whose motto is "World's Toughest Riders") for the long-distance, endurance ride. The Whistle caught up with her a few days after her return to campus.

### How did you first get into riding?

When I was 16 and my brother was 17, I got a car from my grandmother. He got a motorcycle, and when he wanted to go out on dates, he would swap with me. This was in North Carolina, and when I was growing up we had go-carts and dirtbikes and minibikes, so it wasn't difficult to learn. Then about 12 years ago, I was at my mother's house with my brother, and I just decided I wanted to ride again. So we started looking at



motorcycles and I ended up buying one. After I started riding again, I got involved with Blue Knights, an international organization of active and retired law enforcement officials who enjoy riding and do a lot of charity work as well.

### What kind of motorcycle do you ride?

I have two: a 1992 FXR that I bought years ago and a 2007 Street Glide, which is what I rode for this trip. Both are made by Harley-Davidson. The

FXR is a bike that police used to use a lot ... it was probably one of the best models they ever made.

### And how many miles did you clock?

We started on June 19 and got to Key West on July 6. We covered well over 7,000 miles. But the ride was really two in one. The Iron Butt Ultimate Coast to Coast Challenge is one that very few have ever done. It's from Prudhoe Bay, Alaska, to Key West, Florida, in 30 days or less. You have to document the entire ride with receipts and paperwork. Only one other woman has finished this ride, which she did on a Honda Shadow.

The other was the Iron Torch Race, organized by our chapter of Blue Knights to raise money for Special Olympics, which is one of our primary charities.

### I heard the trip got off to a rough start.

Well, the first 1,000 miles was on

*Trip continued, page 3*



An engineering graduate celebrates at Georgia Tech's commencement ceremony.

“QUOTE—  
UNQUOTE”

“Based on the objective, numerical successes of the Act as well as my personal experiences with Cardiomems, I feel strongly we should not alter in any significant way the legislation that has been so successful, and that the rest of the world is using as the model of innovation.”

—*Electrical and Computer Engineering Regents’ Professor Mark Allen, in testimony to the U.S. House Committee on Science and Technology. The committee is revisiting the Bayh-Dole Act of 1980, which created a uniform technology transfer policy and new incentives for commercialization, and enabled non-profit organizations, universities and small businesses to take title to inventions based upon federally funded projects.*

## Scientists issue report on ‘stealth’ tsunami of 2006

John Toon  
Research News

**T**hough categorized as magnitude 7.8, the major earthquake could scarcely be felt by beachgoers that afternoon. A low tide and wind-driven waves disguised the signs of receding water, so when the tsunami struck, it caught even lifeguards by surprise. That contributed to the death toll of more than 600 persons in Java, Indonesia.

“The general assumption was that if you were near the coast where the earthquake took place, you would feel it and be able to run to higher ground,” said Assistant Professor Hermann Fritz, a faculty member at Georgia Tech Savannah and first author of a new Geophysical Research Letters paper about the July 17, 2006 tsunami. “This event caught people by surprise and showed that it’s not always that simple.”

The earthquake was slow rupturing, so it didn’t produce the strong ground shaking on Java that might have alerted people on the beach, he explained.

No local warning was issued for the tsunami waves, which arrived only tens of minutes after the earthquake. Fortunately, the event took place on a Monday. Had the massive waves hit the day before, a major national holiday, the popular beach would have been much more crowded — and the toll higher.

“Warning systems typically don’t work very well for locations near earthquakes, where there are only tens of minutes between the earthquake and the tsunami’s arrival,” noted Fritz, who led an inspection team to Java a week after the event. “It’s pretty much a spontaneous self-evacuation. You normally feel the earthquake or see the ocean withdraw. If you hear the noise in the last tens of seconds before it hits, then it’s just a matter of who makes it and who doesn’t.”

Beyond the quiet nature of the



The July 2006 Java tsunami caused massive erosion on Nusa Kambangan. Here, the beach is completely overwashed, and a monument in the background is stripped of vegetation. Along the shore, Georgia Tech researcher Hermann Fritz documents the tsunami impact along the beach.

catastrophe, they discovered evidence of a 21-meter (65-foot) wave that hit a portion of the coastline, indicating a second event that may have added to the severity of the disaster.

Elsewhere along the 300 kilometers of coastline, waves ranged from 5 to 7 meters, 16 to 24 feet.

In the July 2006 Java tsunami, lifeguards did not notice the withdrawal because the water was receding anyway because of a normal low tide — and because of large wind-produced waves.

“The lifeguards did not recognize the precursors of the tsunami, either the shaking of the earth or the drawing down of the sea,” said Fritz, who also interviewed survivors of the 2004 Indonesian tsunami. “The irony is that many of the lifeguards survived because they were in tall concrete structures sitting more than four meters above the ground, getting just their feet wet — a classic example of vertical evacuation in engineered structures.”

Survivors compared the sound of the tsunami to that of an aircraft landing or a loud boiling sound. It normally produces more than one wave, and the waves can be 10 or 20 minutes apart. Often, the second or third wave is the largest, so many deaths occur when victims return to low-lying areas to look for relatives or assess damage after the first wave hits.

In the deep ocean, tsunami waves move at the speed of a jet aircraft. However, when they approach land, the waves slow as their height builds and energy dissipates. By the time they roll onto a beach, the waves may be moving at vehicle highway speed, but that quickly drops as they encounter structures and vegetation.

“If you start running from the beach when the tsunami strikes, chances are you are not going to make it,” Fritz said. “But if you have a head-start, you have a much better chance — if you know where you’re going.”

Georgia  
Tech



THE  
WHISTLE

Editor: Michael Hagearty

Photos by Rob Felt, unless noted

Published by Institute Communications and Public Affairs.

Publication is weekly throughout the academic year and biweekly throughout the summer.

Archived issues of *The Whistle* can be accessed electronically through the Georgia Tech Web page, or directly at [www.whistle.gatech.edu](http://www.whistle.gatech.edu).

Calendar submissions e-mailed to [editor@icpa.gatech.edu](mailto:editor@icpa.gatech.edu), or faxed to 404-894-7214 must be sent at least 10 days prior to desired publication date. Classified submissions are on a first come, first serve basis. For more information, call 404-385-8336.

Institute Communications and Public Affairs  
Wardlaw Center  
177 North Avenue  
Atlanta, Georgia 30332-0181

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

*Degrees, cont'd from page 1*

Considered by Georgia Tech to be an important tool to measure the success of campus diversity initiatives, the rankings underscore Tech’s efforts to create a diverse campus through strong recruitment and retention practices.

“These rankings are a truly meaningful measurement of Georgia Tech’s continued efforts to create an educational environment where minority students can thrive,” said Gary May, chair of the School of Electrical and Computer Engineering and founder and director of Facilitating Academic Careers in Engineering and Science (FACES), a program designed to encourage minority engagement in engineering

and science careers. “Georgia Tech’s performance over the past decade in producing African-American engineers at all degree levels has been phenomenal.”

One of Tech’s most successful minority recruitment projects is FOCUS, an annual event designed to attract the country’s finest minority undergraduates to its graduate programs. Each year, African-American students from more than 80 colleges and universities across the nation attend the three-day series of lectures, tours, panel discussions and social events.

Diverse: Issues in Higher Education, a publication that covers minorities in American higher education, used statistics collected by the U.S. Department of Education to compile the rankings edition. The

special report identifies the top 100 minority degree producers among institutions of higher education and is the only national report of U.S. colleges and universities awarding degrees to African-American, Latino, Asian-American and Native-American students.

For more information...

**Facilitating Academic Careers in Engineering and Science**  
[www.faces.gatech.edu](http://www.faces.gatech.edu)

**FOCUS**  
[www.focus.gatech.edu](http://www.focus.gatech.edu)

**Summer Undergraduate Research in Engineering/Science**  
[www.sure.gatech.edu](http://www.sure.gatech.edu)

*Trip, cont'd from page 1*

gravel road. In fact, the Alaska Department of Transportation encouraged us not to do the ride. They told us the roads from Fairbanks to Prudhoe Bay were not for the type of motorcycles we had to ride. We thought we knew ahead of time what it was going to be like, but we really didn't ... we traveled on everything from cantaloupe-sized rock to crush and run, and it was extremely slick. We lost a lot of bikes on the way up and on the way back. Just about every bike needed service when we returned to Fairbanks. It took us 16 hours to go 500 miles, and that was before the ride had officially started!

#### Did you ever have any breakdowns?

I made it all the way to Key West before I had a problem. My starter went out. I was at the last gas station, getting ready to take a picture, and it wouldn't start. Other than that, the bike ran like a top.

#### How about day-to-day?

Our group had more than 40 people, and getting to know those folks was a great experience. Some of the places we had pre-planned stops, and other places the Special Olympics had planned events for us. That was the best part, when we had an opportunity to stop in cities like Memphis and meet some of the athletes. Those were some of the most memorable times on the ride. In other towns people knew we were coming and turned out to welcome us. It felt very good to have that kind of support.



Crocker became only the second woman to complete the Ultimate Coast to Coast Challenge, considered an "extreme" ride by the Iron Butt Association. She's pictured here in Key West, Florida.



More than 40 riders participated in the Iron Torch Ride, raising money for the Special Olympics.

#### This trip gave you an opportunity to see more of the country than most. What were the places that stand out in your memory?

It was amazing how fast the time went by, but Alaska was really nice. I flew into Anchorage and took the train to Fairbanks, so I was able to see a lot more. The wildlife in both Alaska and Canada was unbelievable. Montana was also very beautiful.

#### How do you prepare physically for something like that?

I was receiving treatment for a shoulder injury in the months leading up to the ride and was a little worried I wouldn't be ready, but the therapy really helped strengthen my upper body. I also exercised on an elliptical machine for an hour each day. I wanted to be physically fit, but after the first four days we were all wiped out. It was the trip of a lifetime, and I feel blessed to have had an opportunity to go.

#### Are there other motorcycle challenges you want to tackle?

Iron Butt has a "50cc Quest," which is coast-to-coast in less than 50 hours. I've been thinking about that one.

#### How much were the Blue Knights able to raise during the Iron Torch Ride?

Right now we're at \$150,000, and we still have time to raise money.

## IN BRIEF:

### In memoriam

Staff member and alumna Tina Prestridge died June 22 following a five-year battle with breast cancer.

Prestridge began working at the Microelectronics Research Center (MiRC) in 1998, and earned her master's degree in Management of Technology from Tech in 2002. She most recently held the position of assistant director of Business Operations for MiRC.



A memorial fund has been established in her name at the Georgia Tech Foundation. Contributions will be split between the Georgia Tech Foundation and the Susan G. Komen Breast Cancer Foundation. Donations are payable to:

Georgia Tech Foundation, Inc.  
Tina G. Prestridge Memorial Fund  
760 Spring Street NW, Suite 400  
Atlanta, GA 30308

### A statement from President Clough

*What follows is Dr. Clough's reaction to the May 30 vote by the University and College Union (a professional association in the United Kingdom) on a motion to consider a possible boycott of Israeli academic institutions for, among other things, its "complicity" with regard to occupation of the West Bank territories.*

"Spirited discourse and the exchange of ideas are the bedrock of academia. In passing a motion to open debate on a proposed boycott of Israeli academic institutions, the University and College Union (UCU) has asked its membership to consider a resolution that isolates one intellectual community in favor of another.

On behalf of Georgia Tech, I hope that the UCU fulfills its pledge to hold this debate in a respectful and inclusive manner, but I also hope that when the time comes, its membership will resoundingly reject the resolution. It is antithetical to our notion of academic freedom and effectively discriminates against our university colleagues in Israel. Throughout the years, Georgia Tech has enjoyed a rich scholarly exchange in engineering and scientific research with Israeli universities, especially The Technion. We plan to explore opportunities for further research and degree programs in Israel as we have in other nations.

Discrimination of any sort in higher education diminishes us all, and so it is imperative that the recent actions of the UCU against Israel be denounced by all academics. Meaningful change cannot occur when some are excluded from the dialogue."

## Awards & Honors

For "significant contributions as a scientist in the areas of sound-structure interactions and vibration of complex systems; and as an educator, for outstanding mentoring and for authoring a series of seminal textbooks on engineering dynamics for both engineering educators and practitioners," Professor **Jerry Ginsberg** (Mechanical Engineering) has been selected to receive the 2007 Per Bruel Gold Medal for Noise Control and Acoustics by the American Society of Mechanical Engineers.

Professor **Bonnie Heck Ferri** (Electrical and Computer Engineering) will receive the IEEE Education Society's 2007 Hewlett Packard/Harriet B. Rigas Award, which recognizes outstanding faculty women who have made significant contributions to electrical and computer engineering education through excellence in teaching, encouraging and supporting increased participation of women, demonstrated scholarship research, development of educational technology that enhances student learning and service to the engineering profession.

The **Georgia Tech Cable Network (GTCN)** received a record number of Telly Awards in 2007. Three videos were honored in several categories including sports and promotions. "On the Flats," a popular GTCN Sports show, received two awards. A promotional video featuring GTCN's interactive voting Web site was also recognized.

Professor **John Cressler** (Electrical and Computer Engineering) and his recently graduated doctoral students, **Ram Krithivasan** and **Yuan Lu**, were named the recipients of the IEEE Electron Devices Society 2007 George E. Smith Award. This honor is given annually for the best paper to appear in IEEE Electron Devices.

Nominated by students for his dedicated support and guidance, Professor **Marshall Leach** (Electrical and Computer Engineering) has received the 2006-07 IEEE Outstanding Branch Counselor and Advisor Award. Leach has served as the Georgia Tech IEEE student branch counselor from 2003-2006 and from 1972-82.