

Inside:

Goizueta chair named . . . 2
 Google exec visits Tech . . . 2
 In Brief 3
 Campus Events 4



THE WHISTLE

FACULTY/STAFF NEWSPAPER

Volume 32, Number 32 • October 8, 2007

THE GEORGIA INSTITUTE OF TECHNOLOGY

Tech sets ambitious goal for statewide charitable campaign

Michael Hagearty
Institute Communications and Public Affairs

When Georgia Tech moved its operations for managing donations to the annual statewide charitable campaign online two years ago, it was done so in an effort to cut administrative costs and streamline the process.

What was left behind, however, was the human touch. Though the change did offer greater security and privacy for donors, it eliminated the departmental coordinators, the volunteers who helped create a culture of giving back.

According to Rich Steele, who serves as Tech's campus coordinator for the campaign, reinstating the departmental coordinators was essential to reestablish the Institute's

Campaign continued, page 3



State of the Institute address to focus on vanishing boundaries

Robert Nesmith
Institute Communications and Public Affairs

Vanishing boundaries bring new opportunities, according to President Wayne Clough.

Echoing the time when technology is eradicating the communications and physical boundaries spanning the globe, Clough sees the boundaries separating Georgia Tech's various schools and disciplines—even its geography—blurring. In some cases, they have disappeared entirely.

Clough's 2007 State of the Institute address to the faculty, to be delivered at the General Faculty Assembly in the Student Center Oct. 16 at 3 p.m., deviates from past years' in that while spotlighting the university's annual achievements, Clough will do so in the context of the question raised by the president's office in previous years: What shape does the technological university of the 21st century take?

Taking the "vanishing boundaries" theme, Clough's address will highlight four primary areas where the



President Wayne Clough presents his State of the Institute address at the General Faculty Assembly and Academic Senate fall meeting in the Student Center Ballroom, Tuesday, Oct. 16, at 3 p.m.

Institute's traditional borders have fallen or are weakening. In the domain of education, the university has made great strides in taking Georgia Tech's award-winning engineering school and expanding beyond it, imparting the concept of technology into new areas, such as the liberal arts.

Interdisciplinary cooperation is now occurring throughout the university's already-established academic programs. Courses such as biology, computing and engineering have become allies to form the current leading healthcare initiatives, including nanomedicine and bioinformatics.

National borders are falling as a

Address continued, page 3

Cave records offer clues to climate change

David Terraso
Institute Communications and Public Affairs

When Georgia Tech Assistant Professor Kim Cobb and graduate student Jud Partin wanted to understand the mechanisms that drove the abrupt climate change events that occurred thousands of years ago, they didn't drill for ice cores from the glaciers of Greenland or the icy plains of Antarctica, as is customary for paleoclimatologists. Instead, they went underground.

Growing inside the caves of the tropical Pacific island of Borneo are some of the keys to understanding how the Earth's climate suddenly changed — several times — over the last 25,000 years. By analyzing stalagmites, the pillar-like rock formations that stem from the ground in caves, they were able to produce a high-resolution and continuous record of the climate over this equatorial rain forest.

"These stalagmites are, in essence, tropical ice cores forming over thousands of years," said Partin. "Each layer of the rock contains important

Ark continued, page 3

Oscar-nominated short film to be shown at IMPACT event

Leslie Overman
Alumni Association

"I was standing there looking into the dump and it was sort of like I was looking into the depths of hell. I looked down there and just couldn't believe it. There are 2,000 guajeros. Those are the people who gather the trash. I said, 'I've got to know what's going on.'"

In 2002, Mike Glad, IE '68, visited the Guatemala City garbage dump. While there, he made a documentary film that was nominated for an Academy Award.

As part of the College of Management's IMPACT speaker series, "Recycled Life," a 38-minute documentary that Glad produced and co-wrote in response to that visit, will be shown at 4:30 p.m. Oct. 17 in the College's LeCraw Auditorium.

Narrated by Edward James Olmos, "Recycled Life" tells the story of the

generations of men, women and children who make their living recycling items found in the Guatemala City garbage dump.

The film received an Oscar nomination for best documentary short earlier this year.

Glad, the CEO of AllGlad Inc. and owner of more than 20 Midas auto repair shops in northern California, personally financed the film's production, which began in 2002 and wrapped in 2006.

Joining Glad for the IMPACT event will be "Recycled Life" director Leslie Iwerks; Rachel Meyn with Safe Passage, a nonprofit organization dedicated to educating the children of the families that work in the Guatemala dump; and Stephanie Jolluck and Stephanie Servy of World In Need Now Inc., an Atlanta-based organization devoted to helping the poorest communities in Latin America.

Glad hopes that people who see

his film will have a newfound respect for the world's less fortunate. "I want people to understand that there's dignity in a situation that you would look at and otherwise conclude there is none. I want them to understand that and then appreciate what they have," he said.

"When you see this film, your heart will be touched, because these are poor people, but you won't be feeling sorry for them. You won't say this is a person who's here because they're a lowlife or they haven't taken advantage of their opportunities.

"These are people who are there because they were born there, they were raised there. These are survivors. These are people who are working to be part of life. I want people to understand, to say, 'Wow, that's touching that people can have that spirit and that dignity, yet have a set of circumstances that is almost beyond belief.'"



Graduate student Jud Partin drills into a stalagmite in Southeast Asia.

QUOTE

UNQUOTE

"People write about them, and they tell other people how much they love their robots, how Rosie got her name and all these other kinds of things. We think that actually makes them more able to deal with the fact that the robot can't always get it quite right. It does get tangled up [and] does need assistance, in some sense."

—Beki Grinter, an associate professor in the School of Interactive Computing, on research about people's responses and attachments to their Roomies robot vacuum cleaners, and to better understand how to foster human-robot relationships.
(Public Broadcasting Atlanta)

Vela named to Goizueta rotating professorship

Robert Nesmith
Institute Communications and Public Affairs

In an ongoing effort to increase mentoring and support for Latino faculty and students, Georgia Tech has granted School of Electrical and Computer Engineering Assistant Professor Patricio Vela the Goizueta Foundation Junior Rotating Faculty Chair. Recipients are chosen from a campus-wide pool of Latino faculty members for their academic accomplishments and commitment to mentoring students and fellow instructors.

"The role of the Goizueta Foundation Junior Rotating Faculty Chair is to promote Latino faculty and to encourage them to participate in the Georgia Tech Latino community. It is just one of the many ways in which the Goizueta Foundation supports these issues here at Georgia Tech," Vela said. "As such, I am to work closely with the Hispanic Initiatives office, which receives support from the Foundation, in terms of fostering a community for people of Hispanic descent." Effective July 1, Vela will hold the position for three years.

Born in Mexico City, Vela initially came to Georgia Tech as a postdoctoral researcher from the California Institute of Technology in 2005 to conduct research in computer vision and control in the laboratory of professor Allan Tannenbaum.

"Georgia Tech has a nice mix of research and applied research, and I appreciate the emphasis on how the university impacts the state of Georgia," Vela says. "I think (the university) is the ideal size for attracting a good mix of students from diverse backgrounds and with diverse interests."

The Goizueta Foundation professorship enables Vela to recruit, advise and mentor Latino students and faculty and to increase their presence on the Georgia Tech campus.

"This is one of the main contributions that we faculty provide—after all, professors are teachers," he said. "Our interaction with undergraduates should lead to mentoring opportunities, and our interaction with graduate students is one of mentorship with the objective of developing independently creative researchers."

The professorship will provide some financial support for Vela's education and research activities, which he says could also be used for developing and supporting underrepresented minority programs.

"The two primary objectives that I've defined for this position would be to ensure continuity of efforts with regards to the work of the previous Goizueta Foundation Junior Rotating Faculty Chair, Rigoberto Hernandez, and utilize the resources and connections provided to further solidify the Latino community at Georgia Tech," he said. "The purpose of developing a cohesive community is to then more effectively consider outreach, recruitment, retention and mentoring of students within the Georgia Tech and greater Atlanta Latino community."

Georgia Tech is one of the largest producers of Latino engineers in the world, due both to its respected engineering programs and to its targeted recruitment and retention of Hispanic students. These efforts have been supported by the Goizueta Foundation, established in 1992 by the late Roberto C. Goizueta, CEO and chairman of The Coca-Cola Co. from 1980 to 1997.

"As the Goizueta Foundation Professor, I had the opportunity to meet with students one-on-one in the introductory meetings and through lunches and dinners," said



photo courtesy Diana Fouts

Hernandez, an associate professor of chemistry who held the rotating professorship for the past three years.

"There were also chance meetings with the broader Hispanic community at Georgia Tech, as students involved in the Goizueta Foundation fellowships and scholarships would bring other Latino students to some

of these events. It allowed me to hear about the present-day challenges facing our students, and it helped these students see the possibilities of academic careers as well as careers in the industry. This was a wonderful dialogue between students and me.

"And while I can't take full credit for this, I'm proud to say that during my time in the revolving professorship, our School of Chemistry and Biochemistry at Georgia Tech went from one Latino faculty member to three, which helps bring the department more in line with national general population percentages and well above chemistry departments at peer institutions."

"I am very honored to have received the Junior Chair and I will do my best to embody the vision of Roberto Goizueta," Vela said.

"Historically I have been active in the Latino and underrepresented minority community, and this award provides me with additional resources, connections and opportunities to continue that work here at Georgia Tech."

Jennifer Greene contributed to this article.

For more information...

Patricio Vela's faculty Web page
www.ece.gatech.edu/faculty-staff/fac_profiles/bio.php?id=139

Georgia Tech



THE WHISTLE

Editor: Robert Nesmith

Photos by Rob Felt, unless noted

Published by Institute Communications and Public Affairs.

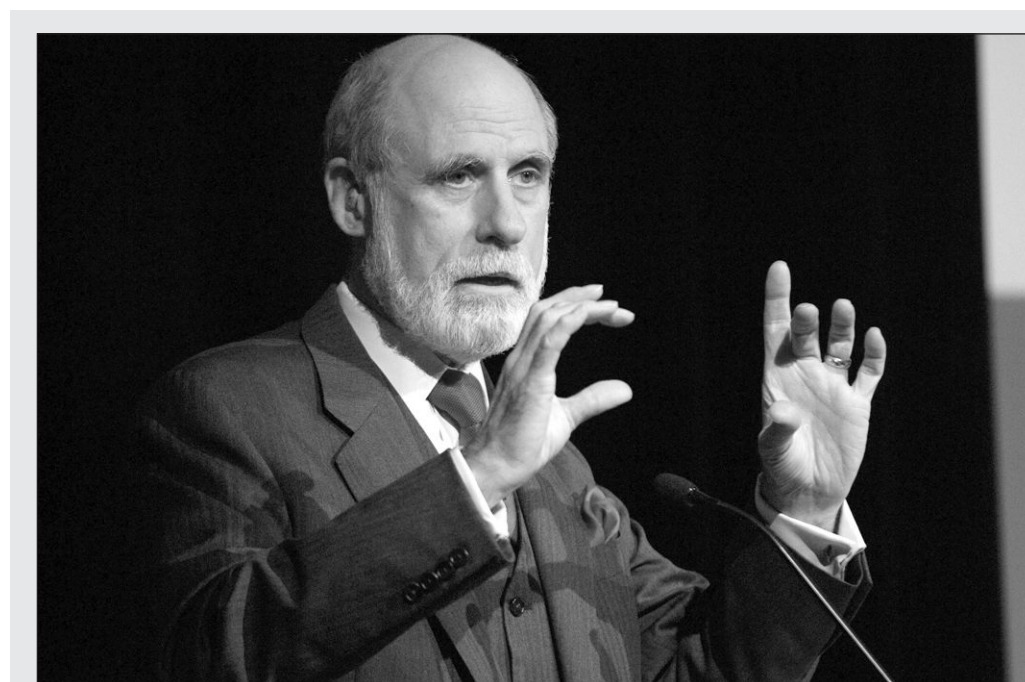
Publication is weekly throughout the academic year and biweekly throughout the summer.

Archived issues of The Whistle can be accessed electronically through the Georgia Tech Web page, or directly at www.whistle.gatech.edu.

Calendar submissions e-mailed to 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 404-385-4142.

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.



Vinton Cerf, vice president and chief Internet evangelist for search engine Google, delivers the keynote address to an over-capacity crowd at the Georgia Tech Information Security Center's GTISC Fall 2007 Security Summit on October 2. The focus of the summit was to explore emerging cyber threats and how to anticipate rather than react to them.

Campaign, cont'd from page 1

reputation as one of the state's most generous contributors.

At a special breakfast for volunteers, President Wayne Clough called the campaign "a very important activity on our campus" and reminded the audience that these gifts have a way of coming back to donors. As an example, he cited two charitable organizations — Trees Atlanta and 100 Black Men of Atlanta — that actively work with Georgia Tech to advance its goals.

Steele followed by saying that this year's goal is for departments to reach 100 percent participation. It's a very reachable goal, he said, given that it only takes a \$1 contribution to be counted as a participant.

Employees who have used TechWorks to modify benefits information during the annual open enrollment will be familiar with the format. Beginning this week, pledges to the Charitable Campaign can be entered in the Employee Self-Service module.

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

Created in 1982 by the state General Assembly, the program enables government employees to make financial contributions that benefit charities operating within Georgia. Individuals can designate which charity benefits from their largesse through a one-time donation or a pre-tax payroll deduction. TechWorks also includes an option for the donor to designate a contribution in memory of another.

Because they do not link with TechWorks, three departments — the Athletic Association, Alumni Association and Georgia Tech Foundation — will participate in the campaign through the traditional pledge-card method.

For more information...

2007 Georgia Tech Charitable Campaign
www.charitable.gatech.edu

Ark, cont'd from page 1

chemical traces that help us determine what was going on in the climate thousands of years ago, much like the ice cores drilled from Greenland or Antarctica."

The tropical Pacific currently plays a powerful role in shaping year-to-year climate variations around the globe, but its role in past climate change is less understood. Partin's and Cobb's results suggest that the tropical Pacific played a much more active role in some of the abrupt climate change events of Earth's past than was once thought and may even have played a leading role in some of these changes.

Polar ice cores reveal that the Northern Hemisphere and the Southern Hemisphere each have their own distinct patterns of abrupt climate change; the tropical Pacific may provide the mechanistic link between the two systems. Understanding how the climate changes occurred and what they looked like is important to helping scientists put into context the current trends in today's climate. They published their findings in the Sept. 27, 2007, issue of the journal *Nature*.

The research team collected stalagmites from the Gunung Buda cave system in Borneo in 2003, 2005 and 2006. Analyzing three stalagmites from two separate caves allowed the pair to create a near-continuous record of the climate from 25,000 years ago to the present.

Partin and Cobb cut open each stalagmite and took 1,300 measurements of their chemical content to determine the relative moisture of the climate at various periods in history, starting from the oldest layers at the bottom to the present at

the top. They dated the rocks by analyzing the radioactive decay of uranium and thorium, and determined the amount of precipitation at given times by measuring the ratio of oxygen isotopes.

"Our records contain signatures of both Northern and Southern Hemisphere climate influences as the Earth emerged from the last ice age, which makes sense given its equatorial location," said Cobb. "However, tropical Pacific climate was not a simple linear combination of high-latitude climate events. It reflects the complexity of mechanisms linking high- and low-latitude climate."

For example, the duo's records suggest that the tropical Pacific began drying about 20,000 years ago and that this trend may have pre-conditioned the North Atlantic for an abrupt climate change event that occurred about 16,500 years ago, known as the Heinrich 1 event.

"In addition, the Borneo records indicate that the tropical Pacific began to get wetter before the North Atlantic recovered from the Heinrich 1 event 14,000 years ago. Perhaps the tropical Pacific is again driving that trend," said Partin.

"Currently our knowledge of how these dramatic climate changes occurred comes from just a few sites," said Cobb. "As more studies are done from caves around the world, hopefully we'll be able to piece together a more complete picture of these changes. Understanding how the dominoes fell is very important to our understanding of our current warming trend."

For more information...

Kim Cobb's faculty Web page
shadow.eas.gatech.edu/~kcobb

Address, cont'd from page 1

result of the university's outreach. As an example, More than 1,000 European graduates have a degree from Tech without stepping foot in the state of Georgia. Continuing Tech's practice of past cooperation, local boundaries are fading as the university carries out its protracted partner-

ships with the city of Atlanta, the state and the world beyond. In the context of these examples, Clough outlines the university's goal in using its assets and unique, entrepreneurial culture to define and determine the university's future.

The address also will be presented to the alumni on Friday, Oct. 19, sponsored by the Georgia Tech Alumni Association. For more information, visit www.gatech.edu/president.

IN BRIEF:

Flexwork program announced

The Office of Human Resources has developed a flexible work policy, allowing employees to alter their standard work schedules or core hours with the approval of managers and supervisors. Arrangements such as telecommuting, compressed work weeks, flexible start and end times and job sharing are included.

The policy, which went into effect September 24, can be viewed by visiting section 8.65 of the Human Resources Manual, located at www.admin-fin.gatech.edu/human. For more information, contact the Human Resources department at www.ohr.gatech.edu.

Course offers emergency preparedness training

Classes for earning an Emergency Preparedness Certificate kicked off October 4, offered by the Office of Organizational Development. Designed primarily for building managers, classes are open to everyone in the Georgia Tech community. Participants will learn what is needed in the event of a campus emergency and receive training in the areas of crisis management and disaster prevention.

The program consists of five required classes and two electives. The next scheduled sessions are from 1 to 4 p.m. November 1 and December 6, in MARC (Manufacturing Research Center) Room 101. For more information, visit www.orgdev.gatech.edu.

Charles Brown, 1947-2007

A notable physicist, professor and mentor, Dr. Charles Stevenson Brown, the first native-born African American to receive a doctoral degree from Georgia Tech, died September 29. He was 60.

Working as part of the private sector with telecommunications companies in fiber-optic cable development, design and systems engineering, and in the academic arena with Morehouse College and Clark Atlanta University, Brown received his degree from Tech in theoretical condensed matter physics in 1981. His dissertation was one of the first in the expanding area of nanoscience.

Brown was one of five American physicists chosen to help promote physics, engineering and high-technology education in African countries as part of the Edward A. Bouchet-ICTP Institute, and he was awarded the Black Engineer of the Year Pioneer Award in 1993.

In addition to advising master's and doctoral candidates at various universities in the Atlanta area, he served as chair of the Department of Physics at Morehouse College until just prior to his death.

Tech grads are shuttle-bound

NASA has assigned the space shuttle crew for Endeavour's STS-126 mission to the International Space Station, targeted for launch in September 2008. Two of its crew members hold degrees from Georgia Tech.

Air Force Lt. Col. Eric A. Boe, the mission's pilot, earned his bachelor's degree in astronautical engineering from the U.S. Air Force Academy, Colorado Springs, Colo., and a master's degree in electrical engineering from Georgia Tech. He was selected as an astronaut in 2000.

Mission specialist Army Lt. Col. Robert S. Kimbrough holds a bachelor's degree in aerospace engineering from the U.S. Military Academy, West Point, N.Y., and a master's degree in operations research from Georgia Tech. He was selected as an astronaut in 2004.