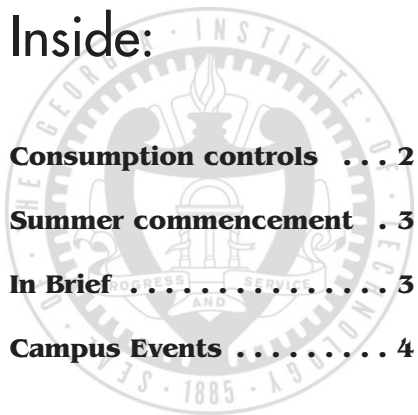


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# THE WHISTLE

FACULTY/STAFF NEWSPAPER

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THE GEORGIA INSTITUTE OF TECHNOLOGY

## Nanotechnology building breaks ground



Governor Sonny Perdue and philanthropist Bernie Marcus were on campus for last week's groundbreaking ceremony of Georgia Tech's new nanotechnology research complex. The \$85 million project will be completed with help from a combination of state and private funds that will position the state as a national leader in "the science of the small." [Full story, page 2]

Located on the site of the former Neely Nuclear Research Center, the Nanotechnology Research Center will focus on research and instruction in microelectronics, semi-conductors, materials, medicine and pharmaceuticals.

## Provost search committee names three finalists

*Matt Nagel*  
*Institute Communications and Public Affairs*

The Georgia Tech Provost Search Committee has made its recommendations for three finalists for the provost and vice president for Academic Affairs position.

The three finalists — all current Georgia Tech administrators — are: Sue Rosser, dean of Ivan Allen College, Gary Schuster, dean of the College of Sciences, and William Wepfer, vice provost for Distance Learning and Professional Education.

The candidates will meet with President Wayne Clough, administration officials and deans in the coming weeks. An announcement of the new provost is expected by the end of August. The new provost will succeed Jean-Lou Chameau, who accepted a position as president of the California Institute of Technology.

The provost is the chief academic and budget officer of the university.

All academic, research and related units including the colleges, the library, professional education, and economic development report to the provost.

The provost oversees academic and budgetary policy and priorities, ensures the quality of the student body and maintains educational excellence. In addition, the provost has oversight responsibility for issues associated with the recruiting, hiring, retention and performance of faculty and academic administrators and for the Institute's tenure process.

Faculty and staff members are invited to provide pertinent, constructive input directly to President Clough. All entries will remain strictly confidential, and no anonymous comments will be accepted.

For more information...

**Provost search**  
[www.gatech.edu/president/provost-search](http://www.gatech.edu/president/provost-search)

### Selected career highlights from the finalists for provost and vice president for Academic Affairs



**Sue Rosser**

- Dean of Ivan Allen College since 1999
- Director of the Center for Women's Studies and Gender Research and professor of anthropology at the University of Florida from 1995-1999
- Has edited and written 120 journal articles on the theoretical and applied problems of women in science and technology and women's health
- Co-principal investigator on Tech's ADVANCE Program for Institutional Transformation grant from the National Science Foundation



**Gary Schuster**

- Dean of the College of Sciences since 1994
- Twenty years in the Department of Chemistry at the University of Illinois, serving as its director from 1990-1994
- Published more than 100 refereed journal articles since coming to Georgia Tech
- Recipient of the 2006 Charles Holmes Herty Medal



**William Wepfer**

- Vice provost for Distance Learning and Professional Education since 2002
- Joined Tech faculty in 1980 and served as associate chair of graduate studies for the School of Mechanical Engineering from 1989-2002
- Member of Georgia Tech's Council for Institutional and Academic Program Review and Accreditation, the Georgia Tech Athletic Association Board of Trustees and the recent search committee for dean of the College of Management

## QUOTE UNQUOTE

"It's where I learned to play poker, playing 25-, 50-cent games."  
—Siddharth Jain, who graduated with an industrial engineering degree in 2001, on his extracurricular activities as a Tech student. Last week, Jain placed 26<sup>th</sup> in a field of more than 8,700 during the World Series of Poker main event, earning almost \$500,000.  
(Atlanta Journal-Constitution)

# Nanotechnology research building breaks ground

Matt Nagel  
Institute Communications  
and Public Affairs

Georgia Tech broke ground on a new building complex last week that has many people on campus and throughout the state filled with high hopes.

"With this new building, we will have 20,000 square feet of space dedicated to nanotechnology focused on physical science and engineering adjacent to a 10,000-square-foot facility dedicated to biological and biomedical nanotechnology research," James Meindl, director of the new Nanotechnology Research Center, said. "This combination doesn't exist anywhere else in the world."

Nanotechnology research will produce materials ten times stronger than steel but much lighter in weight, digital storage units the size of sugar cubes that can hold all the information in the Library of Congress, and tiny medical devices that can detect individual cancer cells and target them with specialized treatment.

In fact, it is the possibilities nanotechnology has in medical research that led philanthropist Bernie Marcus, chairman of the Marcus Foundation, to make a \$15 million commitment to the building earlier this year.

"It is hard for people to understand what can come out of the nanotechnology world, but we do understand the benefits it can produce for medicine," he said. "The combination of Georgia Tech working with other

universities in this state doing nanotechnology research will give us great potential in solving terrible diseases."

In honor of the project's largest private commitment, President Wayne Clough announced Tech would petition the Board of Regents to name the facility the Marcus Nanotechnology Building.

Fifty years ago, Clough continued, the Institute was slow to focus its research efforts on the integrated circuit, which limited its ability to capitalize on the technological wave that accompanied it. But this commitment to nanotechnology research puts Tech "on the cusp of even greater developments," and will help attract research funding as well as top-notch faculty and students.

"This is a historic moment for Georgia Tech and a project that will last a lifetime," he said.

"The Nanotechnology Building is one of the strategic facilities that will offer opportunities to the University System, as well as the state and nation," said University System of Georgia Chancellor Erroll Davis.

"Without question, it will help us accomplish our future education, research and economic development missions."

Georgia Governor Sonny Perdue, who initiated the project with a \$45 million challenge grant in 2003, said the new building will provide a wealth of research for the state.

"This facility isn't going to be exclusive. It is going to be available



Professor Jim Meindl, who will be the founding director of the Nanotechnology Research Center, said Georgia Tech's commitment to the fusion of the organic and the inorganic was unique to nanotechnology research.

to scientists throughout our university system and in the private sector as well," he said. "The role of government is to help facilitate a place where good ideas can come together and generate new ideas. This facility promotes innovating for the sake of a better quality of life for our citizens."

Completion of the new facility is scheduled for 2008.

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

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## Study: smaller bowls, spoons key to eating less

Controlling the urge to over-serve

Brad Dixon  
College of Management

When it comes to choosing food bowls, you might want to follow Goldilocks's lead and opt for the baby-bear serving, but not because of the temperature. What makes smaller bowls "just right" for most people is how they help control the urge to over-serve food, says Koert van Ittersum, assistant professor of marketing in the College of Management.

Smaller spoons also help stop people from piling on too much food, according to a study conducted by van Ittersum with Brian Wansink of Cornell University and James Painter of Eastern Illinois University. Titled "Ice Cream Illusions: Bowls, Spoons, and Self-Served Portions," their study will appear in the September issue of the *American Journal of Preventive Medicine*.

The researchers believe their findings result from the human perceptual tendency to judge object sizes based on comparisons with neighboring items. Participants in the study,

for example, served themselves 31 percent more ice cream when they were given a 34-ounce bowl instead of a 17-ounce bowl. Their servings increased by 14.5 percent when they were given a 3-ounce spoon instead of a 2-ounce utensil. When given both a large spoon and big bowl, they served themselves 56.8 percent more. Yet they were unaware of the greater ice cream quantities.

Study participants were nutrition experts, a group one might expect to exhibit more moderation at food serving and consumption. The researchers invited 85 nutrition experts who didn't realize they were the subjects of an experiment to an ice-cream social. "While it is not clear how accurate people are in estimating ounces and calories, it was believed that this group would be most accurate given their expertise in nutrition," van Ittersum said.

When people over-serve themselves food, they're likely to overeat, he notes. That's because people eat an estimated 92 percent of the food they serve themselves. "If you want to lose weight, use smaller china and flatware," he advised. "While four ounces of food on an 8-ounce plate might look like a good helping, four



Assistant  
Professor Koert  
van Ittersum  
studies the  
relationship  
between the  
perception  
and reality of  
consumption.

ounces on a 10-ounce plate could seem skimpy."

He believes these research findings have implications not only for those watching their weight, but also for the hospitality industry. Many experts have blamed expanding American waistlines on the growing size of restaurant food portions. Through the use of smaller plates, bowls and spoons, restaurants might be able to deflect such criticism while still convincing diners that they're getting a good value.

"Of course, you cannot push this strategy to the limit," he said. "If people still feel hungry after they've finished their plate, you have a serious problem."

## One last lecture



School of Public Policy Professor Bryan Norton delivers the keynote address to bachelor's and master's degree candidates at Alexander Memorial Coliseum during Georgia Tech's 225<sup>th</sup> commencement ceremony. Tradition holds that the winner of the Distinguished Professor Award, Tech's highest faculty honor, is the featured speaker at summer commencement. In all, some 800 students are now officially on the alumni rolls.

## SWAN system helps sightless navigate environment

Elizabeth Campell  
Institute Communications  
and Public Affairs

Imagine being blind and trying to find your way around a city you've never visited before, or inside a smoke-filled building with zero visibility. Georgia Tech researchers are developing a wearable computing system called the System for Wearable Audio Navigation (SWAN) designed to help the visually impaired, firefighters, soldiers and others navigate their way in unknown territory, particularly when vision is obstructed or impaired. The SWAN system, consisting of a small laptop, a tracking chip, and bone-conduction headphones, provides audio cues to guide the person from place to place, with or without vision.

In an unusual collaboration, Frank Dellaert, assistant professor in the College of Computing and Bruce Walker, assistant professor in the School of Psychology and College of Computing, met five years ago at new faculty orientation and discussed how their respective areas of expertise — determining location of robots and audio interfaces — were complimentary and could be married in a project to assist the blind. The project progressed slowly, as the researchers worked on it as time allowed and sought funding. Early support came through a seed grant from the Graphics, Visualization and Usability (GVU) Center. More recently the two received a \$600,000 grant from the National Science Foundation to further develop SWAN.

"SWAN is a satisfying project because we are looking at how to use technology originally developed for military use for peaceful purposes," Dellaert said. "The challenge is integrating all the information from all the various sensors in real time so you can accurately guide the user as they move toward their destination."

Walker's expertise in human computer interaction and interface design includes developing auditory displays that indicate data through sonification or sound.

"By using a modular approach in building a system useful for the visually impaired, we can easily add new sensing technologies, while also making it flexible enough for firefighters and soldiers to use in low visibility situations," he said. "One of our challenges has been designing sound beacons easily understood by the user but that



Assistant Professors Bruce Walker and Frank Dellaert display the current SWAN prototype, consisting of a small laptop computer worn in a backpack, a tracking chip, a digital compass, a head tracker, four cameras and light sensor, and special headphones called bone phones, which send auditory signals via vibrations through the skull without plugging the user's ears.

are not annoying or in competition with other sounds they need to hear."

The sensors and tracking chip worn on the head send data to the SWAN applications on the laptop which computes the user's location and in what direction he is looking, maps the travel route, then sends 3-D audio cues to the bone phones to guide the traveler along a path to the destination.

The researchers' next step is to transition SWAN from outdoors-only to indoor-outdoor use. Since GPS does not work indoors, the computer vision system is being refined to bridge that gap. Also, the research team is currently revamping the SWAN applications to run on PDAs and cell phones, which will be more convenient and comfortable for users. The team plans to add an annotation feature so that a user can add annotations to share with other users. There are plans to commercialize the SWAN technology after further refinement, testing and miniaturizing components for the consumer market.

For more information...

**SWAN project**  
sonify.psych.gatech.edu/research/swan

## IN BRIEF:

### 'Cut Out Hunger' program returns favor to students

A new endowed scholarship agreement is being funded by "Cut Out Hunger" founder Stefany Nelson, whose nonprofit Web service helps families save money on their food bill while helping local food banks. In 2003, Nelson's Web site was revamped by several of Tech's computer science students for course credit. Nelson and her cost-saving service attracted the attention of Good Morning America, offering a contract to produce segments for the national news program.

"I am deeply grateful to Georgia Tech and these students for their creativity, their many hours of work and their determination to improve the functionality of this Web site," Nelson said in a 2003 article about the project. "As a result, more people will save money and donate food to feed the hungry."

### Georgia Tech Military Affairs Group forms

It didn't take long for more than 300 Georgia Tech alumni to endorse the formation of the Georgia Tech Military Affairs Group — the Alumni Association's newest affinity group.

Capt. Marcus Smith, assistant professor of aerospace studies and unit admission adviser in the Air Force ROTC program; and retired Air Force Gen. George Harrison, director of strategic initiatives at GTRI, headed the effort.

The group is open to all Tech alumni, faculty, staff, students and friends who have a military affiliation and civilians affiliated with the Department of Defense, said Debra Thompson, senior manager of affinity groups for the Alumni Association.

The group plans to provide professional and social networking opportunities, encourage student recruitment in ROTC, provide support for active duty personnel and encourage Roll Call participation among military affiliated alumni, faculty and friends.

The new organization has scheduled a Homecoming meet and greet on Oct. 26 and Military Appreciation Week activities Nov. 6-11.

For more information, call 894-0779 or e-mail [debra.thompson@alumni.gatech.edu](mailto:debra.thompson@alumni.gatech.edu).

### Summit seeks volunteers

Diversity Programs and Georgia Tech will partner with the Anti-Prejudice Awareness Consortium in hosting the Power Over Prejudice Summit, bringing students from metro-area middle schools for a learning experience about diverse ethnic, cultural, socioeconomic and religious backgrounds. Students from different schools work in small groups led by community volunteers who are trained facilitators.

The Georgia Tech community is invited to volunteer to be an assistant or facilitator at the Summit, which will be held Sept. 13-15 in the Student Center Ballroom. For more information, visit [www.antiprejudice.org](http://www.antiprejudice.org) or call 894-2561.

### New parking payment option

Parking and Transportation now offers an online payment method for citations. For information, visit [www.parking.gatech.edu/paycitation](http://www.parking.gatech.edu/paycitation).