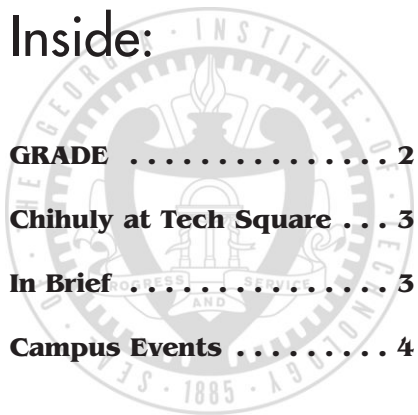


Inside:

**GRADE** ..... 2  
**Chihuly at Tech Square** ... 3  
**In Brief** ..... 3  
**Campus Events** ..... 4



# THE WHISTLE

FACULTY/STAFF NEWSPAPER

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THE GEORGIA INSTITUTE OF TECHNOLOGY

## Regional study ranks Georgia Tech highly in nanotechnology

*Strengths include cited authors, prize winners and dissertations*

John Toon  
Research News

Georgia Tech ranks third in the nation for the number of nanotechnology researchers that are "highly cited" in peer-reviewed publications, and in the top 10 for the number of first authors publishing in such journals. Overall, Georgia Tech is among the nation's top 25 institutions for National Science Foundation (NSF) nanotechnology research support, and leads the South in such key indicators as the number of nanotechnology doctoral dissertations and nanotechnology prize winners.

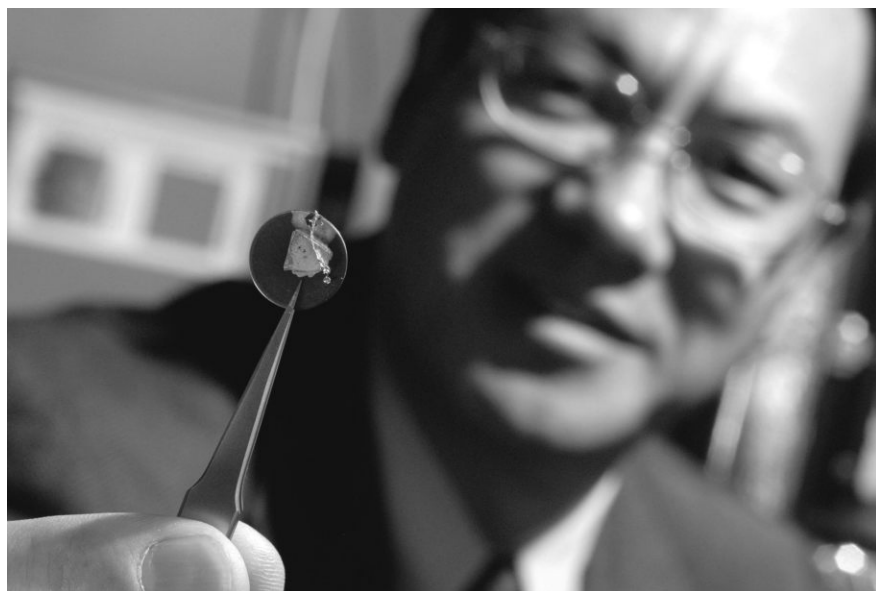
The statistics are contained in "Connecting the Dots: Creating a Southern Nanotechnology Network," a study done through the Program in Science, Technology and Innovation Policy — a joint initiative of the Georgia Tech Enterprise Innovation Institute and the Georgia Tech School of Public Policy — for the Southern Growth Policies Board. The study evaluated the South's competitive position in the budding nanotechnology industry. The study's research team

evaluated five factors in nanotechnology — human capital, knowledge generation, research and development funding, patents and commercialization — for the period 1995-2004.

"Traditionally, the South hasn't been viewed as having strengths in nanotechnology research, but in this study we show that there is a substantial amount going on," said Jan Youtie, one of the study's co-authors and a principal research associate in the Enterprise Innovation Institute. "The big strengths are that 20 percent of all nanotechnology research publications in the United States come from the region, and that four of the top 25 institutions in nanotechnology funding support are in this region."

In addition to Tech, the other three top-25 institutions from the region are Oak Ridge National Laboratory, the University of North Carolina and North Carolina State University. Though the collaboration between Georgia Tech and Emory University has won large federal grants for studying nanotechnology in the life sciences, those awards came after the report's study period, noted Youtie, who is also an adjunct associate professor in the School of Public Policy.

*Study continued, page 2*



Regents' Professor Zhong Lin Wang holds a sample nanowire array that could be used to power nanometer-scale devices. Wang's publications helped Georgia Tech rank third in the nation for the number of nanotechnology researchers that are "highly cited" in peer-reviewed publications.

### Gailey staying put



At a press conference late last week, Georgia Tech head football coach Chan Gailey announced his intention to remain in that position for the upcoming season. Gailey, whose name has been connected to other coaching vacancies in recent weeks, said he felt an obligation to listen when contacted by his former employers and that it had been a "unique opportunity" to hear about the future direction of those teams.

The 55-year-old Gailey has a record of 37-27 and has taken the team to a bowl game in each of his five seasons at Tech.

## Georgia Tech enrolling students in new evening MBA program

Brad Dixon  
College of Management

Beginning this fall, Georgia Tech's MBA program will be available in an evening format for the first time, allowing working professionals to complete their studies without interrupting their careers.

"Our evening MBA students will enjoy the same benefits as full-time students," says Steve Salbu, dean of the College of Management. "Taught in small classes by professors with world-class reputations for their research and teaching, our students learn how to take advantage of the many business opportunities made possible by emerging technologies and to succeed in an increasingly global economy."

Application deadlines for enrollment are May 1 for fall 2007 and October 1 to start in spring 2008.

Most students will take two courses each semester, attending classes two nights per week, and complete the program in approximately three years. The College of Management's

full-time MBA program takes two years.

Standards for evening MBA students will remain as high as those required for acceptance into the full-time program, Salbu notes. "Our commitment to technology, innovation, ethical and sustainable business practices and international education consistently draws top-notch students," he says.

Paula Wilson, director of MBA admissions for Georgia Tech, says interest in the evening option was high before the College of Management even announced it. "We've gotten calls for years from people wanting a part-time MBA program with the Georgia Tech brand and the academic rigor that entails," Wilson says. "Demand for our full-time program remains strong as well. Now people have a choice."

For more information...

**College of Management**  
[www.mgt.gatech.edu/eveningmba](http://www.mgt.gatech.edu/eveningmba)



"As demand for corn increases, so too will its prices. This will drive the ethanol industry to look for lower-cost feedstock and as these alternatives develop, price and demand will stabilize."

—Arthur Ragauskas, an associate professor in the School of Chemistry and Biochemistry, who is calling on governments and industry to move away from corn and develop non-food biomass (switchgrass, recycled waste materials and corn stalks) into viable resources for biofuels. (Wall Street Journal)

## Resource helps promote universal Web design

Matt Nagel  
Institute Communications  
and Public Affairs

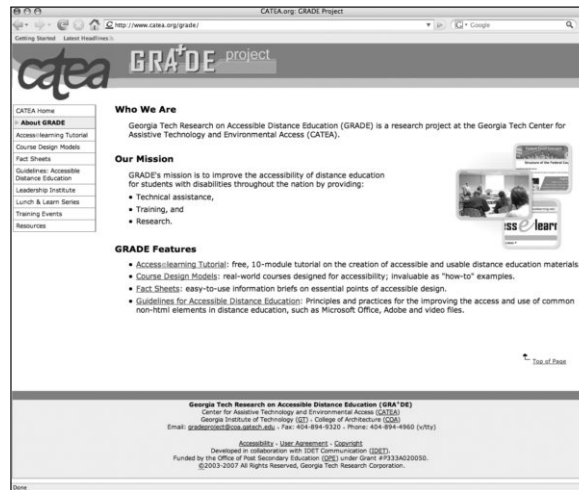
Georgia Tech's Center for Assistive Technology and Environmental Access (CATEA) is trying to create a more user-friendly Web. The center has developed several online tools to help those creating Web sites, distance learning programs and training sites make their products more accessible to the disabled and to the aging population — and more usable for everyone.

One of the online tools, a project called GRADE (GT Research on Accessible Distance Education), concentrates on how to make several mainstream software products more accessible and efficient on a Web site.

"Most of the time, when people think of usability for a Web site they are thinking of the so-called 'able-bodied' — of people with full vision, full hearing, or people that have use of their hands to use a mouse," said Robert Todd, a research scientist for the Center. "We are trying to make the Web more accessible to everyone, including those who may not be able to read small print, use a mouse or hear content from online audio or video."

Todd says there are several easy solutions that educators, businesses and Web developers can use to make their sites more accessible.

"There are some simple elements that developers can use to allow someone to navigate with ease," said Todd. "One example would be to make sure the site can be can be



The GRADE project provides research, training, technical assistance and information to improve the accessibility of distance education for students with disabilities at universities and colleges.

enlarged for those who use large-print or simply suffer eye fatigue."

That is just one example of how little changes can make a big difference to those with a disability.

"In many cases, businesses are missing an opportunity to target two large audiences: the aging population and a young, growing body of portable Web device users," said Todd. "While the two populations have different problems with Web use, accessible design can address them all."

Todd says even though these problems are very different, both can be resolved with relative ease.

"Our online resources include tutorials and guides that anyone can access online and it tells you step by step how to address these issues. You can spend as much time as you want because we have in-depth instruction or just the fast facts available for people," said Todd.

Researchers at CATEA are teaming

up with Georgia Tech's Distance Learning and Professional Education department to offer an updated version of the GRADE project as a course starting this spring. The class is called Universal Web Design, with continuing education credits awarded to participants.

Todd suggests that it might be a great way for area businesses and educators to make sure their Web sites are updated and accessible to everyone. While the Center hopes to offer a consultation service in the future, the classes or online tutorial are currently the best routes for business owners to make sure their Web sites are using the latest technology.

For more information...

**GRADE project**  
[www.catea.org/grade](http://www.catea.org/grade)



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

Study cont'd from page 1

One of Georgia Tech's strengths is its connections to other national and international nanotechnology research institutions. "Part of the reason that Georgia Tech has a leading position in the South is that we have a lot of researchers who are networked outside their departments to researchers elsewhere," she explained. "This is a strength because many research advances occur by cross-fertilization with other departments and disciplines."

Though Georgia has strengths in nanotechnology research and development, it faces significant weakness in patents and the commercialization of technology — both key elements for a robust nanotechnology industrial community. Georgia has invested in developing startup companies, but it's not yet clear what role early-stage companies will play in turning nanotechnology innovations into commercial products.

"Nanotechnology is very pervasive across industry because it facilitates improvement in a broad range of products and processes," notes Philip

### Within the South, the state of Georgia ranks:

- first in the number of nanotechnology prize winners;
- second in the number of nanotechnology publications;
- second in the number of highly cited primary researchers;
- second in the number of doctoral dissertations;
- third in the dollar value of Small Business Innovation Research (SBIR) awards in nanotechnology areas;
- third in the number of nanotechnology patents; and
- fourth in the dollar amount of nanotechnology-related grants from the National Science Foundation.

—source: "Connecting the Dots: Creating a Southern Nanotechnology Network"

Shapira, another co-author and a professor in the School of Public Policy. "For example, we are seeing nanoparticles and nanofibers being introduced as parts of tires, microelectronics, clothing and biomedicine. These industries are dominated by big companies, so this may be an area where big companies have a more important role to play than startups."

Because the nanotechnology industry is young and will likely advance through several distinct growth phases, state efforts to gain leadership still have time to pay off, Shapira says. To take advantage of

the nanotechnology revolution, he adds, Georgia will not only have to attract more venture capital for startups, but also develop linkages with well-funded companies that have the resources to bring new products to market.

"None of these are easy or automatic, but they are areas that we have to push," he said. "I think there is a window during which Georgia could emerge as a bigger player in nanotechnology commercialization if we can develop strategic policy action, as well as leadership on the business side."



## Chihuly glass to enhance Technology Square

Dan Treadaway  
Institute Communications  
and Public Affairs

Many residents of Atlanta, Georgia, and the Southeast were first exposed to the groundbreaking work of internationally renowned glass artist Dale Chihuly in 2004, when the Atlanta Botanical Garden presented "Chihuly in the Garden," an exhibition of 50 original glass sculptures.

The exhibition presented Chihuly's unique glass sculptures within the Atlanta Botanical Garden's lush setting, weaving together art and nature.

"Chihuly in the Garden startled visitor expectations, stretched their imaginations, and offered a new way of experiencing plants and art," said Mary Pat Matheson, executive director of the Atlanta Botanical Garden. As a result of the Atlanta exhibition's success, Matheson provided advice on staging Chihuly's work to representatives of Kew Gardens in London, Detroit Botanical Garden, Denver Botanic Gardens and New York Botanic Garden.

While the Atlanta Botanical Garden exhibition was temporary, Georgia Tech is working toward securing a permanent collection of Chihuly glass works in the atrium of the College of Management building at Technology Square.

"The beauty and unique visual quality of Dale Chihuly's glass sculpture will be an ideal complement for a signature structure such as the College of Management building," said Robert Thompson, senior vice president for Administration and Finance. "The Management building's prominent location at the new entrance to the Georgia Tech campus in Midtown and its many conference and gathering spaces make it a highly visible destination. Chihuly glass will enhance the aesthetic experience of students, faculty, staff, alumni, and visitors, along with the thousands of people who pass by the building every day."

"The buildings at Technology Square were conceived with an eye toward incorporating significant and visually dramatic works of public art," said alumnus Thomas Ventulett III, chairman emeritus of architectural firm Thompson, Ventulett, Stainback and Associates, designer of



A photomontage of Chihuly chandeliers similar to those that are expected to be commissioned for the Management building

Technology Square, including the Management building. "Dale Chihuly's inspired works will elegantly fulfill the early vision we had for the building as much more than a utilitarian academic structure, but a destination space that invites both contemplative reflection and an exchange of ideas. I encourage my fellow alumni to give serious consideration to supporting our efforts to secure this unique collection."

Thanks to efforts led by Ventulett, Thompson, alumna Deborah Willingham and alumnus H. Ronald Nash Jr., the Institute has purchased two pieces of Chihuly glass and is now considering commissioning a set of chandeliers that will incorporate traditional Georgia Tech colors, along with the "technology blue" theme used throughout Technology Square.

## IN BRIEF:

### New NEETRAC director named

Richard Hartlein has been named the new director of the National Electric Energy Testing Research and Applications Center (NEETRAC). A principal research engineer, Hartlein has served as the Center's interim co-director since Hans Püttgen retired from Georgia Tech last year.

"Given his background and experience, Rick is uniquely qualified to lead NEETRAC to a pre-eminent position in the field of electric energy research," said Gary May, chair of the School of Electrical and Computer Engineering.

While at Tech, Hartlein has served as the Center's Underground Systems Program Manager, where he develops and manages research and testing projects related to electric utility underground cable systems and markets NEETRAC to prospective members. A graduate of Tech's School of Mechanical Engineering, he also serves in several leadership roles in industry technical organizations related to this field.

### Founder's Day names

The Ivan Allen College is proud to award alumnus Charles Smithgall with the 2007 Ivan Allen Jr. Prize for Progress and Service. This year the occasion will mark a new precedent, in that the prize will be awarded posthumously for the first time. His widow, Lessie Smithgall, is a co-recipient and will receive the prize, to be awarded at the College's annual Founder's Day luncheon on March 15 — the birthday of Mayor Allen.

### Call for nominees

With continuing support from BP America, the Center for the Enhancement of Teaching and Learning (CETL) is pleased to call for nominations for the 2007 CETL/BP Junior Faculty Teaching Excellence Award and the 2007 CETL/BP Outstanding Teaching Assistant (TA) Award. The Junior Faculty Teaching Excellence Award honors junior faculty for excellence in teaching and educational innovation. Nomination packets are due Feb. 7. Further information and application details are available at [www.cetl.gatech.edu/spotlight/teachingawards.htm](http://www.cetl.gatech.edu/spotlight/teachingawards.htm).

The Outstanding TA Award honors exemplary undergraduate and graduate TAs who are nominated by their departments. Nomination packets are due Feb. 12, and further information and application details are available at [www.cetl.gatech.edu/services/tas/taaward.htm](http://www.cetl.gatech.edu/services/tas/taaward.htm).

### Telephone system update

The Office of Information Technology is pleased to announce that effective January 9, 2007 the conversion to the new Georgia Tech Telephone system is slightly more than 50 percent complete. With approximately 90 buildings remaining, OIT Associate Vice President John Mullin said full campus conversion is anticipated by spring.

## Awards & Honors

Professor **Stephen P. DeWeerth** (Biomedical Engineering) was recently named to the College of Fellows of the American Institute for Medical and Biological Engineering (AIMBE).

For his contributions to the growth of Georgia's life sciences industry, Dean **Don Giddens** (Engineering) will be awarded the 2007 Biomedical Industry Growth Award by the Georgia Biomedical Partnership (GBP).

Professor and Georgia Electronic Design Center Director **Joy Laskar** (Electrical and Computer Engineering) has been named the Schlumberger Chair in Microelectronics, a position held for more than 20 years by Phillip Allen until his retirement in 2005.

Regents' Professor **Paul Kohl** has been named the Hercules Inc./Thomas L. Gossage Chair in Chemical and Biochemical Engineering.

Professor **Madhavan Swaminathan** (Electrical and Computer Engineering) is the new Joseph M. Pettit Professor in Electronics. Swaminathan started working at Tech in 1994 with the Microsystems Packaging Research Center, becoming a tenure track faculty member in 1997.

Professor **A.P. Meliopoulos** (Electrical and Computer Engineering) has been named the Georgia Power Distinguished Professor, previously held by Hans Püttgen until his retirement in March 2006.