Sarah Eby-Ebersole
Institute Communications
and Public Affairs

President Wayne Clough used his annual State of the Institute address titled "Technological Leadership in a Changing World," to highlight Georgia Tech's contributions to solving the thorny problems facing society. He spoke to faculty and staff on October 8.

Noting that the Institute's goal to define the technological university of the 21st century can serve the needs of the nation and the world, he said, "Never has the need for technological leadership been so great, and never has Georgia Tech been better positioned to step forward and provide that leadership."

Clough began his remarks with a recap of the previous year's achievements. He said the caliber of incoming freshmen continues to rise, although the freshman class did not increase in size. Enrollment reached a new high as the result of the retention of 91 percent of last year's freshmen, growth in graduate enrollment and growing enrollments online and onsite in southeast Georgia, France and Singapore.

He pointed out that 56 percent of student-athletes were on the Dean's List or Faculty Honors last spring, and predicted improved graduation rates for student-athletes.

The caliber of the Georgia Tech faculty is impressive, Clough said. The Institute welcomed 67 new faculty, including three school chairs and 16 eminent scholars who assumed endowed chairs from the Campaign for Georgia Tech.

He also highlighted this year's celebration of the first 50 years of women at Georgia Tech, but said that more needs to be done to strengthen the participation, perspective and leadership of women in technology.

Clough expressed pleasure at the Institute's "sticking power" in the national rankings, maintaining its position among the top ten public universities with individual disciplines either improving or holding their own among the nation's best. Research awards reached a record $279 million last year, even as funding became more competitive.

However, the most exciting part of Georgia Tech research is its creativity and innovation, Clough said. Examples included a four-inch insect-like robot called an Entomopter developed for specimen and data collection on Mars, and a search engine named Soauma.

Address continued, page 3

Student-athletes face tougher academic standards

Dan Treadaway
Institute Communications
and Public Affairs

If a set of proposed academic requirements is adopted by the NCAA, Georgia Tech student-athletes will face higher standards for achieving and maintaining their eligibility to participate in intercollegiate athletics.

Mechanical Engineering Associate Chair and Professor Bill Weiper, who chairs the Georgia Tech Athletic Association's Academic Committee, presented information on the proposed standards at the Oct. 8 meeting of the General Faculty and General Faculty Assembly. The proposed standards include the following:

• The minimum number of high school core courses would increase from 13 to 14 for initial eligibility.
• The minimum GPA for continued eligibility would increase from no requirement to 1.8 at the end of the first year, 1.8 to 2.0 at the end of the second year, and 1.9 to 2.0 at the end of the third year. The current 2.0 minimum would remain in effect for the end of the fourth year.
• Minimum level of progress toward earning a degree would increase from 25 percent to 40 percent for the second year, 50 percent to 60 percent for the third year, and 75 percent to 80 percent for the fourth year.

"This last one is perhaps the biggest change of all," Weiper said. "It will have a significant impact on our student-athletes. There is some talk of perhaps bringing the 40 percent figure down to 35 percent for the second year."

Weiper said the Athletic Association is committed to providing the academic resources student-athletes need to be successful, regardless of the NCAA standards they must meet.

Software security

Pamela Rary of Tech's Legal Affairs Office gave a presentation on the effects occurring in many software licensing agreements in the wake of 9/11. Many software licensing agreements now contain a provision restricting the export or re-export of the software, sometimes even listing specific countries covered under the restriction. Such restrictions, Rary said, extend to foreign nationals from those countries who are also students at American universities.

Rary said an expert of technology or source code is "deemed" to take place when released to a foreign national within the United States. "Release" consists of making technology or software available to...
Michael Hagerty  
Institute Communications and Public Affairs

In conjunction with National Customer Service Week, the Office of Information Technology's customer support department held a three-day open house last week, featuring vendor demonstrations, service displays, give-aways, tours and workshops. According to OIT, it is being planned as an annual event to give the campus some insight into the capabilities and services the department can provide, as well as remind users about issues of information security.

Herb Baines, director of information security for OIT, spoke about the importance of safeguarding networked systems, in particular citing how certain applications such as online banking and student financial aid benefits programs could expose Tech to a computer invasion from the outside, compromising both the integrity and confidentiality of information that flows through its systems. Accepted use of state-owned equipment, computers, he said, does not involve downloading copyrighted material from the Internet. "We are seeing a lot of use of file-sharing programs from the faculty and staff," said Baines, adding that education was the most important tool in safeguarding the Institute.

In addition, OIT also gave demonstrations of the new generation 'audiovisual carts' for the classroom. The carts, designed like prods, are on wheels and outfitted with a VCR, computer, flatbed monitor, and ports for notepads or laptops. The carts are specifically designed to work with existing classroom technologies as needed by faculty during presentations or lectures.

Another workshop involved the Video Development Initiative (VIDI), a technology initiative that promotes the use of digital video in research and higher education through video conferencing. During the workshop, customers received an overview of the VIDI slate, explored Tech's role in the project and received an introduction to video conferencing as well as a demonstration on how it works.

From 1976 until 1987, DeMillo was professor of computer science at Georgia Tech and was founding director of Georgia Tech's Software Engineering Research Center. DeMillo's accomplishments as head of this center included the development and successful application of high quality software technology to high visibility national security initiatives and systems such as the Patriot Air Defense System and the Digital Defense Initiative. He also directed the Software Test and Evaluation Project for the Office of the Secretary of Defense, in which he was the chief architect of the Department of Defense policy for software testing and evaluation.

DeMillo received his doctoral degree in information and computer science from Georgia Tech and his bachelor's degree in mathematics from the College of St. Thomas in St. Paul, Minn.

OIT hosts first open house to educate campus users

DeMillo, cont'd from page 1

Richard DeMillo

at least 10 days prior to desired display. E-mail Whistle submissions to whistle@cc.gatech.edu or fax to Whistle at 404-894-5216 at least 10 days prior to desired display. For more information, call 404-894-9217.

College of Computing, on assisted-cognition food prep system in the works at Tech's Everyday Computing Lab. Researchers envision the system helping senior citizens prepare meals, sparing them from sugar shock or overeating.

(Wired)

The sheer length of this one is phenomenal. (It's an) innovative solution to an environmental problem."

—Mike Meyers, a professor of civil engineering, on the conveyor belt being employed to move enough dirt to Hartfield Atlanta International Airport to raise the 9,000-foot runway to the other four. The belt is five miles long and over the next three years will move a total of 27 million cubic yards of dirt at a rate of one cubic yard per second.

(Atlanta Journal-Constitution)

College. His research strengths dovetail perfectly with the research going on currently in the College, and his long-time relationships with current faculty ensure a smooth transition and a fast start toward enhancing the reputation of an already solid academic unit."

The College of Computing is comprised of 60 faculty, 10 research faculty and 2,010 students. Ranked 12th in the nation, the College houses interdisciplinary research centers including the Georgia Tech Information Security Center (GTISC), the Graphics Visualization and Usability Center ( GVU); Center for Experimental Research in Computer Systems (CERCS); and the Modeling & Simulation Research Center (MSREC). DeMillo will lead the education, research and outreach activities of the College, which includes the fields of cognitive science, computer architecture, database systems, educational technology, future computing environments, graphics and visualization, human computer interaction, information security, intelligent systems and robotics, networking and telecommunications, programming languages and compilers, parallel and distributed systems, software engineering and theoretical computer science.

"This is a very exciting time to be joining the Georgia Tech community; there are tremendous changes taking place in information technology and Georgia Tech has always been at the forefront of that change. I look forward to helping Tech continue its climb to the very top ranks in computing," said DeMillo.

From 1976 until 1987, DeMillo was professor of computer science at Georgia Tech and was founding director of Georgia Tech's Software Engineering Research Center. DeMillo's accomplishments as head of this center included the development and successful application of high quality software technology to high visibility national security initiatives and systems such as the Patriot Air Defense System and the Digital Defense Initiative. He also directed the Software Test and Evaluation Project for the Office of the Secretary of Defense, in which he was the chief architect of the Department of Defense policy for software testing and evaluation.

DeMillo received his doctoral degree in information and computer science from Georgia Tech and his bachelor's degree in mathematics from the College of St. Thomas in St. Paul, Minn.
called Fast-Talk that can search 20 hours of audio and video recordings in a second using sig-
mal processing to identify words phonetically.
He reported on the progress of the undergradu-
ate initiative he had announced two years ago, which included midterm grade reports and expanded research opportu-
nities. Although it is too early for any meaningful statistics on midterm grades, Clough emphasized the value of urg-
ing students to meet with their advisors at midterm to address academic problems.

Research discoveries
It is clear that technology, not politics, will solve
environmental problems, Clough said. He
described the work of Professor Aris
Georgakakos, who is devel-
op ing a management system for the Nile River.

Air quality studies worldwide are benefiting from new instrumentation
developed at Georgia Tech to measure time-particulate
assessed pollutants. Able to
capture samples as often as
every four minutes, this technology
gives scientists a new level of detail.

Global solutions
Turning his attention to technological leadership
in a changing world, Clough said, “Although
much good has come from globalization, we
have also learned that it is not so simple and, unfor-
tunately, not always benign.” He noted that the
world is increasingly look-
ing for leaders who can
come up with thought-
ful technological solutions
or complex problems and,
expressed his belief that
Georgia Tech will increas-
ingly be viewed as a
source of ideas and lead-
er.

He offered numerous
eamples of faculty and student contri-
butions to solving broader
problems, beginning with homeland security following
the September 11 terrorist attacks. The work of the
Center for Emergency Response Technology,
Instruction and Policy (CERTIP) attracted
President George W. Bush and Homeland Security
Director Tom Ridge to campus for an emergency
response demonstration featuring CERTIP’s tech-
nologies.

Other research projects cited by Clough included a portable sensor that can instantly
detect chemical and biological agents and a bio-
gel that can be applied to protect and treat
wounds where immediate medical care is not
available.

The best way to eliminate the scourge of ter-
orism over the long term is to contribute
to international solutions,” Clough said. He
described Georgia Tech researchers with land mine
victims in the Republic of Georgia in the former
Soviet Union, which alerted the Institute to the
need for better technology and qualified practi-
cioners in orthotics and prosthetics. As a result,
Georgia Tech now offers the only master’s degree
in this discipline.

Researchers
It is clear that technology, not politics, will solve
environmental problems, Clough said. He
described the work of Professor Aris
Georgakakos, who is devel-
op ing a management system for the Nile River.

Air quality studies worldwide are benefiting from new instrumentation
developed at Georgia Tech to measure time-particulate
assessed pollutants. Able to
capture samples as often as
every four minutes, this technology
gives scientists a new level of detail.

Global solutions
Turning his attention to technological leadership
in a changing world, Clough said, “Although
much good has come from globalization, we
have also learned that it is not so simple and, unfor-
tunately, not always benign.” He noted that the
world is increasingly look-
ing for leaders who can
come up with thought-
ful technological solutions
or complex problems and,
expressed his belief that
Georgia Tech will increas-
ingly be viewed as a
source of ideas and lead-
er.

He offered numerous
eamples of faculty and student contri-
butions to solving broader
problems, beginning with homeland security following
the September 11 terrorist attacks. The work of the
Center for Emergency Response Technology,
Instruction and Policy (CERTIP) attracted
President George W. Bush and Homeland Security
Director Tom Ridge to campus for an emergency
response demonstration featuring CERTIP’s tech-
nologies.

Other research projects cited by Clough included a portable sensor that can instantly
detect chemical and biological agents and a bio-
gel that can be applied to protect and treat
wounds where immediate medical care is not
available.

The best way to eliminate the scourge of ter-
orism over the long term is to contribute
to international solutions,” Clough said. He
described Georgia Tech researchers with land mine
victims in the Republic of Georgia in the former
Soviet Union, which alerted the Institute to the
need for better technology and qualified practi-
cioners in orthotics and prosthetics. As a result,
Georgia Tech now offers the only master’s degree
in this discipline.

Researchers
It is clear that technology, not politics, will solve
environmental problems, Clough said. He
described the work of Professor Aris
Georgakakos, who is devel-
op ing a management system for the Nile River.

Air quality studies worldwide are benefiting from new instrumentation
developed at Georgia Tech to measure time-particulate
assessed pollutants. Able to
capture samples as often as
every four minutes, this technology
gives scientists a new level of detail.

Global solutions
Turning his attention to technological leadership
in a changing world, Clough said, “Although
much good has come from globalization, we
have also learned that it is not so simple and, unfor-
tunately, not always benign.” He noted that the
world is increasingly look-
ing for leaders who can
come up with thought-
ful technological solutions
or complex problems and,
expressed his belief that
Georgia Tech will increas-
ingly be viewed as a
source of ideas and lead-
er.

He offered numerous
eamples of faculty and student contri-
butions to solving broader
problems, beginning with homeland security following
the September 11 terrorist attacks. The work of the
Center for Emergency Response Technology,
Instruction and Policy (CERTIP) attracted
President George W. Bush and Homeland Security
Director Tom Ridge to campus for an emergency
response demonstration featuring CERTIP’s tech-
nologies.

Other research projects cited by Clough included a portable sensor that can instantly
detect chemical and biological agents and a bio-
gel that can be applied to protect and treat
wounds where immediate medical care is not
available.

The best way to eliminate the scourge of ter-
orism over the long term is to contribute
to international solutions,” Clough said. He
described Georgia Tech researchers with land mine
victims in the Republic of Georgia in the former
Soviet Union, which alerted the Institute to the
need for better technology and qualified practi-
cioners in orthotics and prosthetics. As a result,
Georgia Tech now offers the only master’s degree
in this discipline.

Researchers
It is clear that technology, not politics, will solve
environmental problems, Clough said. He
described the work of Professor Aris
Georgakakos, who is devel-
op ing a management system for the Nile River.

Air quality studies worldwide are benefiting from new instrumentation
developed at Georgia Tech to measure time-particulate
assessed pollutants. Able to
capture samples as often as
every four minutes, this technology
gives scientists a new level of detail.

Global solutions
Turning his attention to technological leadership
in a changing world, Clough said, “Although
much good has come from globalization, we
have also learned that it is not so simple and, unfor-
tunately, not always benign.” He noted that the
world is increasingly look-
ing for leaders who can
come up with thought-
ful technological solutions
or complex problems and,
expressed his belief that
Georgia Tech will increas-
ingly be viewed as a
source of ideas and lead-
er.

He offered numerous
eamples of faculty and student contri-
butions to solving broader
problems, beginning with homeland security following
the September 11 terrorist attacks. The work of the
Center for Emergency Response Technology,
Instruction and Policy (CERTIP) attracted
President George W. Bush and Homeland Security
Director Tom Ridge to campus for an emergency
response demonstration featuring CERTIP’s tech-
nologies.

Other research projects cited by Clough included a portable sensor that can instantly
detect chemical and biological agents and a bio-
gel that can be applied to protect and treat
wounds where immediate medical care is not
available.

The best way to eliminate the scourge of ter-
orism over the long term is to contribute
to international solutions,” Clough said. He
described Georgia Tech researchers with land mine
victims in the Republic of Georgia in the former
Soviet Union, which alerted the Institute to the
need for better technology and qualified practi-
cioners in orthotics and prosthetics. As a result,
Georgia Tech now offers the only master’s degree
in this discipline.