Tech named to 13-member national nanotechnology network

Georgia Tech will be among 13 universities participating in the new National Nanotechnology Infrastructure Network (NNIN) announced last month by the National Science Foundation (NSF). The network will be an integrated, nationwide system of user facilities to support research and education in nanometer-scale science, engineering and technology.

Led by Cornell University, the NNIN will enable students and researchers from any school in the United States — as well as scientists from corporate and government laboratories — to have open access to resources they need for studying molecular and higher length-scale materials and processes, and for applying them in a variety of structures, devices and systems.

The $70 million network is expected to begin operation this month for a five-year period.

Georgia Tech will share its nanotechnology fabrication resources — including a new system capable of creating nanometer-scale features — and lead the network's education and outreach efforts, said James Meindl, director of Tech's Microelectronics Research Center.

"Georgia Tech is installing a $4 million electron-beam nanolithography system that will allow etching of patterns at the nanoscale," he said. "This tool, funded by the Georgia Research Alliance, will facilitate advances in bio-electronics, nanotechnology and advanced microelectronic systems."

"The new network was approved by the National Science Board, the 24-member policy advisory body of the National Science Foundation. "The network will be an investment of at least $70 million under NSF's nanoscale science and engineering priority area," said Lawrence Goldberg, NSF senior engineering advisor. "NNIN expands significantly beyond the current capabilities of the five-university National Nanofabrication Users Network (NNUN) that is concluding its ten-year life span this year.""

"By assembling and offering to share our specialized resources with any and all qualified users, we have created the world's largest, most comprehensive and accessible nanotechnology laboratory," said Sandip Tiwari, the Cornell electrical engineering professor who will serve as director of the NNIN.

The network will not only provide users across the nation with access to leading-edge tools and instruments, but also will contribute to the development of a new workforce skilled in nanotechnology and the latest laboratory techniques.

"The NNIN comes on the heels of an October announcement by Governor Sonny Perdue of plans for a new Nanotechnology Research Center at Georgia Tech. The facility would be funded by $36 million from a private donor and up to $45 million in state money."

To be located at the corner of Atlantic Avenue and Ferst Drive, the center would be the most advanced nanotechnology research facility in the southeast, the first of its kind in the region, and among the most sophisticated in the country. The 160,000-square-foot facility will include 30,000 square feet of clean room space.

For more information...

www.nsf.gov
National Science Foundation
Microelectronics Research Center
www.merc.gatech.edu

NNIN member universities:
Cornell University
Georgia Institute of Technology
Harvard University
Howard University
North Carolina State University
Pennsylvania State University
Stanford University
University of California at Santa Barbara
University of Michigan
University of Minnesota
University of New Mexico
University of Texas at Austin
University of Washington

Campus police stress need for community effort to reduce crime

Michael Hagearty
Institute Communications and Public Affairs

The Georgia Tech Police Department is urging members of the community to take an active role in helping to reduce the campus crime rate.

Speaking in the Student Center Theater as part of a seminar on crime prevention, Sergeant Randy Barrone also provided crime statistics for the past year, coupled with suggestions on limiting the risk of becoming a victim.

Each member of the campus community bears some responsibility for creating a safe environment, he said. Whether it involves reporting a broken light or suspicious activity, Barrone encouraged people to give a voice to their concerns.

"We need the community just as much as they need us," he said. "Campus safety is not just our job; it's the job of all of us who go to school and work at Georgia Tech."

In 2003, larceny was by far the most common crime, with 9,202 reported incidents. Of those, nearly one-half involved automobile break-ins. Often times, a minimal level of caution can make the difference. "Things such as leaving your car unlocked or having items in plain view invite criminal activity," Barrone said. "If they can't see anything, they may not even hesitate."

Crime continued, page 3

Alumnus designs 9/11 memorial

Sean Selman
Institute Communications and Public Affairs

Following an eight-month international competition that drew more than 5,000 entries, a memorial designed by a Georgia Tech alumnus has been chosen as the future World Trade Center Memorial in New York City.

Michael Arad, who graduated from Georgia Tech in 1996 with a master's degree in architecture, designed "Reflecting Absence: A Memorial at the World Trade Center Site" for the international World Trade Center Site Memorial Competition, launched in April 2003.

Arad's signature image is a southeast aerial view, where two reflecting pools occupy the footprints of the Twin Towers.

Design continued, page 2
New library service links resources for faster, better research

Michael Hagearty
Institute Communications
and Public Affairs

A new service offered through the Library and Information Center Web site can dramatically cut research time, while substantially increasing the ease of access to thousands of academic journals.

Through a robust linking system known as SFX, users can now jump from abstract citations to the full text of an article. Or, if not available electronically, the system offers alternatives — as users click on a link in a citation, they are able to view a list of other access options, such as Library availability in the print format, document request or interlibrary loan.

“We were getting a lot of faculty feedback that it was easier for us to access our electronic resources,” said Lori Critz, a reference librarian closely tied with the implementation of SFX at Tech. “This service saves everybody a lot of time and energy.”

The Library subscribes to dozens of indexes and services, categorized by academic discipline, that connect users with thousands of electronic journals. What Library officials discovered, however, was that access to a large percentage of those journals required some advanced knowledge of the Library’s holdings. The average user, for example, might not know that one journal may be available through multiple databases.

SFX simplifies the process, integrating all of the Library’s resources and creating greater independence on the user’s part. “Now, all options are presented,” Critz said.

In essence, SFX is an overlay to the Library’s current database system. As users generate search returns and select citations, they will find a button connecting them with a menu showing how to access its full text.

The service is open to all users at Georgia Tech.

Design, cont’d from page 1

His original design includes reflecting pools and waterfalls in the footprints where the former World Trade Center towers once stood. It is to be built in memory of all the victims of terrorist attacks on Sept. 11, 2001, and of the six people killed in the 1993 World Trade Center bombing.

“I am very honored and overjoyed by this,” said Arad. “I hope that I will be able to honor the memory of all those who perished and create a place where we may all grieve and find meaning.”

“I will do my best to rise to the enormity of the task at hand. It is with great humility that I regard the challenges that lie ahead — and it is with great hope that I will find the strength and ability to meet them,” he said.

“I think he did a magnificent job of sorting through all the many different interests and requirements needed for this memorial at this site,” said Doug Allen, associate dean of the College of Architecture.

“His is a quiet scheme. It is a complex and difficult thing to pull off at this particular location, and for someone at his age to design this scheme and have it chosen is truly significant,” Allen said.

Vartan Gregorian, chair of the jury that selected Arad’s design for the memorial, said, “In its powerful yet simple articulation of the footprints of the Twin Towers, Reflecting Absence” has made the gaping voids left by the Towers’ destruction the primary symbol of loss. While these voids still remain empty and incom- solable, the surrounding plaza’s design has evolved to include towering groves of trees, traditional affirmations of life and rebirth.

“The result is a memorial that expresses both the incalculable loss of life and its regeneration,” Gregorian said. “Not only does this memorial creatively address its mandate to preserve the footprints, recognize individual victims and provide access to bedrock, but it also wonderfully reconnects this site to the fabric of its urban community.”

Officials said that Arad’s winning design has evolved significantly since the eight finalists were placed on exhibit at New York City’s Winter Garden this past November, and more changes are expected before it is to be built. A new design will be unveiled in a public presentation to take place this week, officials said.

Nominations requested for annual faculty honors

The Faculty Honors Committee is soliciting nominations of faculty members as candidates for recognition in seven categories.

Given the highly competitive reputations of Georgia Tech and Linda Thomas-Mobley, chair of the committee, said that her committee welcomes nominations, which require submission of previously submitted and updated materials. Other noteworthy items include the addition of one new award category, established to recognize faculty involved in undergraduate research efforts.

The awards, which will be presented at the Faculty/Staff Honors Luncheon on April 7, 2004, include:

• Distinguished Professor Award;
• W. R. Bionne Award Outstanding Teacher Award and the W. Howard Ector Outstanding Teacher Award;
• Outstanding Service Award;
• Outstanding Continuing Education Award;
• Outstanding Interdisciplinary Activities Award;
• Outstanding Innovative Use of Education Technology Award; and
• Outstanding Undergraduate Research Mentor.

Nominations must be received by January 31, 2004. More information about the categories and nomination requirements may be found at www.facultyhonors.gatech.edu.
School of Chemistry and Biochemistry growing reputation reflected in enrollment, faculty

Sean Selman
Institute Communications and Public Affairs

With 218 graduate students in Georgia Tech’s School of Chemistry and Biochemistry this fall, the School now ranks as the 12th largest program in the country, officials said.

The School also boasts 55 new, first-year students this fall — its largest incoming class to date — and seven new research groups, each of which is producing more research opportunities for faculty and students than ever before at Tech.

"The recruitment within the School has been strong and successful for the past several years," said Professor Thor Orlando, chair of the School of Chemistry and Biochemistry. "Several peer schools have experienced a slight increase in enrollment, too, but not at the level that our school has.

Orlando said that the large increase in graduate and undergraduate enrollment indicates several things, including the rising prominence of the School in academic research circles. Much of that is due to the acquisition of new, senior faculty members in recent years.

"The students are the most important reason that the school exists, and their presence and efforts are what fuels the science we are all engaged in," Orlando said. "The number of students and their quality and success are the real indicators of our School’s strength."

What’s more is that the soon all research portfolio of the School also is the strongest it has ever been, said. It has grown into a broad and interdisciplinary research enterprise, with strengths in essentially all areas of chemistry plus fast growing disciplines such as materials science, nanoscience, biophysics and chemical physics.

When they tour programs and meet faculty, prospective students have several new people to meet at the School of Chemistry and Biochemistry for 2003 and 2004. Among the new researchers and programs this year are:

• Professor Uwe Bunz, who studies synthetic organic chemistry, plus polymer and materials science.

• Professor Joseph Perry, a physical chemist studying three-dimensional, nanoeengineered assemblies plus organic electronic and photonic materials.

• Professor Seth Harder, an organic chemist who studies the synthesis of novel organic materials for use in nonlinear optics and photonics.

• Professor Jean-Luc Bredas, who studies the theory of carrier transport in polymer systems, plus the theoretical description of organic photonic and electronic devices.

• Professor Bridgett Barry, a biophysicist studying mechanisms of photosynthesis and charge transfer in biological media; and

• Assistant Professor Facundo Fernandez, an analytical chemist who examines and develops new mass spectrometry methods that can be used for disease detection.

Prominent computing society taps four faculty members

The College of Computing faculty boasts four of the 30 new fellows selected last month by the Association for Computing Machinery (ACM).

"This year’s ACM fellows join the ranks of outstanding ACM members who have contributed to the computing community through distinguished service and significant achievements in information technology," said John White, the CEO of ACM.

"By their contributions, they have advanced the computing discipline and its increasingly critical role in society in countless ways.

The four join a distinguished list of colleagues to whom ACM and its members look for guidance and leadership in the field of information technology. The four new fellows are:

• Richard DeMillo, dean, for contributions to the engineering of reliable and secure software.

• Mary Jean Harrold, professor, for contributions in software engineering.

• Ramaseshan Jain, professor, for contributions to computer vision and multimedia information systems.

• Seth Marder, an organic chemist studying three-dimensional, nanoeengineered assemblies plus organic electronic and photonic materials.

ACM will formally recognize the new fellows at its annual awards banquet later this spring.

Crime, cont’d from page 1

they’re going to move on."

When it comes to recovery of property, Barrone said the public can help by keeping records of an item’s serial number. Those numbers, when fed into a statewide crime database, will be flagged should someone try to resell stolen goods.

"A lot of the people we see are repeat offenders," Barrone said. "We’re really talking about a small population of criminals."
Arts & Culture

Jan. 16
The Fest Center for the Arts welcomes the Aqualia Theatre Company for an 8 p.m. performance of Shakespeare’s “Othello.” Faculty and staff receive a 10 percent discount. For tickets, call 894-9600.

Jan. 17
The Fest Center for the Arts welcomes the Umbilical Brothers for an 8 p.m. performance. Faculty and staff receive a 10 percent discount. For tickets, call 894-9600.

Brown Bags/Conferences/Lectures

Jan. 21
The School of History, Technology and Society and the Center for the Study of Women, Science and Technology present “Dna (Structure): at 11 a.m. in room 236B, Student Services Building. The program will be repeated on Jan. 27. For more information, call 894-2757 or refer to www.counseling.gatech.edu/worksshops.htm.

Jan. 20
The Office of Organizational Development sponsors the one-day course “Get Organized NOW!” in room 508, Savant Building. To register, visit www.trainwvch.gatech.edu/mastical.asp.

Jan. 30
The Office of Environmental Health and Safety hosts a six-hour course in defensive driving techniques. There is no cost to attend. Call 383-0265 for information.

Misellaneous

Ongoing

Technology. Tech’s chapter of Toastmasters International for faculty, staff, alumni and spouses, meets every Thursday at 7:30 a.m. in room 1102 of the Neuroscience Research Center. For more information, e-mail terry.nolan@business.gatech.edu or refer to www.toastmasters.gatech.edu.

Jan. 14
Registration for Student Center Options classes ends. Late registration, with additional charge, is available Jan. 15-16. For more information, visit www.lis.gatech.edu.

Jan. 18
Georgia Tech will hold its annual King Celebration Ecumenical Service with keynote speaker Stewart Burns, a civil rights historian and author of Daybreak of Freedom, the history of the Montgomery bus boycott, at 10 a.m in the Student Center Ballroom. Free and open to the public. For more information, call 894-5070.

Jan. 19
Campus closed for the Martin Luther King Jr. Holiday.

CLASSIFIEDS

Appliances
Kenmore refrigerator, exc. condition, white, $135. Call 678-232-5475 or e-mail david.gifford@oit.gatech.edu.

Automobiles
1993 Infiniti J30, gold, 139K miles OBO. Call Keiko, 770-723-9242. 3.2L engine, Original owner. $800 speed manual, aluminum rims. Cute, 1992 Ford Festiva. Teal, 2-door, 4-speed manual, sette w/6CD changer and subs, Flowmaster dual exhaust, AM/FM cas-

Miscellaneous
Hitachi A3-inch HDD w/stand, excellent condition, $1,200. Call 678-232-5475 or e-mail david.gifford@oit.gatech.edu.
Free ping pong table to the first per-
son to pick it up. Good shape: All accessories. Call Doug, 770-723-7048. 130-gallon tank/stand, $550 OBO. 3 ball pythons, $25/ea. OBO. Bearded dragon lizard w/20-gallon tank/light, $130 OBO. Dumerils boa w/50-gal-

SPORTS/FOOTBALL/RECREATION
Two boat trailer tires and rims. Loadstar 4.80x14 tire. Almost new. $15 for the pair. E-mail scott.murray@osp.gatech.edu.