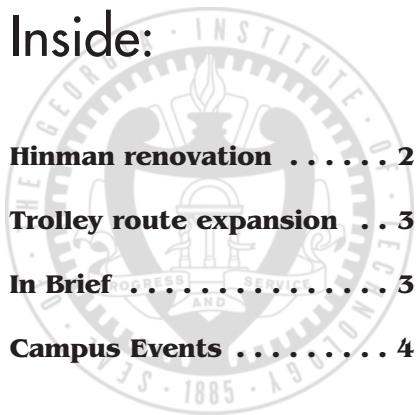


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THE WHISTLE

FACULTY/STAFF NEWSPAPER

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THE GEORGIA INSTITUTE OF TECHNOLOGY



After school tutorials

Graham Rhodes and Matthew Heige look on as School of Electrical and Computer Engineering Assistant Professor George Riley illustrates the inner workings of a computer during last month's Summer ICE@Tech, a component of Tech's partnership with the Georgia Department of Education that seeks to increase the level of computer literacy among high school teachers and students. The one-week camps introduce participants to digital media formats, as well as career fields such as robotics.

photo by Ethan Frewitt

Communications AVP to leave Tech

Michael Hagearty
Institute Communications
and Public Affairs

After more than a decade directing Georgia Tech's marketing and communications efforts, Institute Communications and Public Affairs (ICPA) Assistant Vice President Bob Harty has announced his intention to leave Tech at the end of the month.

"Georgia Tech has been a wonderful experience, full of incredible challenges and significant rewards," he said. "It's now time to move on with the next step in my professional career, and I look forward to finding new opportunities."

"I leave Georgia Tech in good hands. Amelia Gambino will be an excellent interim leader, and ICPA has a veteran management team and

talented staff. This will be a very attractive position for my successor, and I know that whomever takes this job will be in a very good position to continue to lead Tech forward."

President Wayne Clough added, "It has been my pleasure to work with Bob for 10 years. During this time he has brought a new level of professionalism and creativity to our entire approach to communications, from our strategic positioning to our Web presence to our face-to-face meetings with the media. His contributions to Georgia Tech are both significant and far-reaching. We wish Bob and (his wife) Mona all the best in the next phase of their lives."

Within a month of starting his new job at Tech, Harty was busy coordinating and managing Tech's public

Harty continued, page 3

Physics names new chair

David Terraso
Institute Communications
and Public Affairs

Mei-Yin Chou is the new chair of Georgia Tech's School of Physics. The professor of theoretical condensed matter physics will take the helm in July. She follows Ron Fox, who will remain at the School as a Regents' professor of physics.

"I'm delighted that Mei-Yin has accepted the position as chair," said Provost Jean-Lou Chameau. "She is an exceptional scholar and has great leadership potential. I am excited about the future of the physics program under her leadership and look forward to supporting her drive toward continued success."

Chou said one of the first orders of business will be to continue the growth of the School. Work is being done to build a biophysics program that she hopes to have in place within the next few years.

"In the past, the traditional way of looking at bio-related phenomena has been by using the biologist's point-of-view," she explained. "But there's a way physics can contribute: mainly by using experimental techniques developed for physics as well as applying methods in theoretical physics to the study of biological systems."

Working with the faculty, Chou said the School plans to identify one or two more areas for expansion as well as strengthen existing research groups by hiring faculty members who "define the field."

The School of Physics currently has 27 faculty members. Chou said she hopes to increase that to about 40 in five to seven years.

"Physics must continue to play a vital role in the institutional development of Georgia Tech by performing frontier research and by providing an outstanding educational environment," she said. "Our strengths are that we have very good faculty members and scientists. This is a good intellectual group. We want to improve the community so faculty and students will feel this is a productive environment. I'm a strong believer that the whole is greater than the sum of its parts."

For more information...

School of Physics
www.physics.gatech.edu



Mei-Yin Chou

Mynatt to lead Gvu Center

Joy Weaks
College of Computing

Rich DeMillo, John P. Imlay dean of the College of Computing, announced last month that Associate Professor Elizabeth Mynatt, has been appointed director of the Graphics, Visualization and Usability (GVU) Center, effective July 1. Professor and former Gvu Center Director Aaron Bobick will focus his energies as chair of the Interface Computing Division (ICD) in the College of Computing.

Mynatt is an internationally recognized expert in the areas of ubiquitous computing and assistive technologies. She is one of the principal researchers in the Aware Home Research Initiative, and played a pivotal role in creating the new doctor program in Human-Centered Computing.

"These appointments reflect the wonderful leaders we have at the College of Computing," DeMillo said. "Beth brings an incredible breadth of experience to Gvu. She has worked in industry and continues to be an academic leader here at Georgia Tech. I am particularly excited about her ability to reach many segments of the Georgia Tech community to continue Gvu's interdisciplinary mission."

"The Gvu Center is a unique and

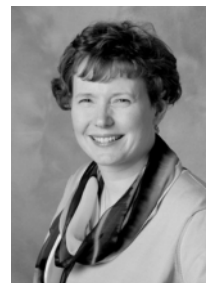
valuable asset for Georgia Tech, and I look forward to focusing on Gvu's cross-campus activities, as well as its national and international leadership in research and education," Mynatt said.

Bobick led the Gvu Center through a time of significant change, expanding its intellectual diversity and shepherding the move to Technology Square.

"This change will allow me to focus more intently on evolving the Interface Computing Division of the College of Computing from an internally focused administrative unit into an externally visible, intellectually coherent and important academic entity," Bobick said. "GVU is now an intellectual force in many domains, and I'm so proud to be associated with it. As ICD chair, I am strongly vested in Gvu continuing to be successful."

For more information...

GVU Center
www.gvu.gatech.edu



Beth Mynatt

QUOTE UNQUOTE

"The questionable nature of this game as a taxpayer-funded project is precisely in its lack of commitment to creating those important conversations about the seriousness of being involved in the military."

—Ian Bogost, a professor in Ivan Allen College's digital media program, on "America's Army: Special Forces," a computer game developed by the Department of Defense as a marketing device promoting military service.
(Denver Post)

Architecture plans for expansion into Hinman Building

Dan Treadaway
Institute Communications
and Public Affairs

For the past several years, the College of Architecture has been dealing with a compelling paradox: impressive jumps in student and faculty quality, as well as recognition via external rankings have driven a sizable increase in enrollment, which in turn has led to overcrowding in many courses, particularly studios.

"The College's facilities have not kept pace with the steady rise in the quality of its programs, faculty, and students, which consistently rank among the finest in the nation," said College of Architecture Associate Dean Doug Allen. "In fact, the College is ranked last among twenty-one comparable peer universities in square footage of instructional space per student."

Allen said that based on benchmarking studies, studio-based instruction requires a minimum of 75 square feet per student. In turn, the current average in the College is approximately 45 square feet, and this is for only upper division architecture studios.

Ample and appropriately outfitted instructional space is a crucial factor for attracting and retaining the ever-increasing number of students in design-oriented programs, where their project-based coursework requires significantly more space than traditional lecture-style instruction. Specific space challenges include severe overcrowding in Architecture and Industrial Design studios, inadequate faculty office space and absence of space to accommodate the rapidly expanding research mission and graduate student enrollment.



The College of Architecture plans to raise \$7.5 million for the renovation of the Hinman Building, above, as well as the Architecture East and West Buildings.

As a first step in addressing these concerns, the College of Architecture was offered the use of the Hinman Building in 2004 to accommodate its expanding needs for Architecture, Industrial Design, City and Regional Planning, the IMAGINE Laboratory and other programs and center activities. The building is located on 4th Street directly across from the Architecture East and West Buildings. The College plans to raise a minimum of \$7.5 million for the renovation of not only the Hinman Building, but also the Architecture East and West Buildings.

"The Hinman Building is historically important to the College of Architecture," said Allen. "In addition to providing an 'architectural' corridor linking three of the College's buildings to each other, it also provides much-needed gallery, exhibition

and research space."

Renovating Hinman and other key instructional spaces is a pressing need in an increasingly competitive marketplace, according to College of Architecture Dean Thomas D. Galloway.

"The existing lack of quality space for studio instruction, offices and research is at a critical juncture for the College," said Galloway. "Our programs have grown beyond our capacity, putting the College at a competitive disadvantage with its peer schools in attracting and retaining top faculty and graduate students. This situation also makes expansion of existing programs quite difficult. To maintain our position and improve upon our ranking, we need to expand our infrastructure capacity in the teaching and learning environment."

Georgia
Tech



THE
WHISTLE

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

New liquid cooling technique helps computer chips beat the heat

John Toon
Research News

A new technique for fabricating liquid cooling channels onto the backs of high-performance integrated circuits could allow denser packaging of chips while providing better temperature control and improved reliability.

Developed at Georgia Tech, the wafer-level fabrication technique includes polymer pipes that will allow electronic and cooling interconnections to be made simultaneously using automated manufacturing processes. The low-temperature technique, which is compatible with conventional microelectronics manufacturing processing, allows fabrication of the microfluidic cooling channels without damage to integrated circuits.

As the power density of high-performance integrated circuits increases, cooling the devices has become a more significant concern. Conventional cooling techniques, which depend on heat sinks on the

backs of circuits to transfer heat into streams of forced air, will be unable to meet the needs of future power-hungry devices.

High temperatures can cause early failure of the devices. By controlling average operating temperature and cooling hot-spots, liquid cooling can enhance reliability of the integrated circuits.

"This scheme offers a simple and compact solution to transfer cooling liquid directly into a gigascale integrated (GSI) chip, and is fully compatible with conventional flip-chip packaging," said Bing Dang, a graduate research assistant in the School of Electrical and Computer Engineering. "By integrating the cooling microchannels directly into the chip, we can eliminate a lot of the thermal interface issues that are of great concern."

The Georgia Tech approach allows a simple monolithic fabrication of cooling channels directly onto integrated circuits.

"Once the integrated circuit is

fabricated, it cannot withstand high temperatures without causing damage," said Dang. "People are looking at liquid cooling in all forms to solve the thermal issues affecting advanced integrated circuits, and the goal is to prevent damage to the chips. We have invented a new way to do it."

Calculations show that the system, which can have either straight-line or serpentine microchannel configurations, should be able to cool 100 watts per square centimeter.

Dang expects the technology to be used first in high-performance specialty processors that can justify the cost of the cooling system. So far, the researchers have demonstrated continuous liquid flow on a chip for several hours without failure, but additional testing is still needed to confirm long-term reliability.

For more information...

Research News

www.gtresearchnews.gatech.edu

Pilot program expands trolley route to Midtown

In an effort to bring more Midtown residents to the bustling 5th Street corridor and Technology Square and to further encourage local mobility, Georgia Tech has expanded its Tech Trolley service deeper into Midtown.

Tech established the new route — the Midtown Trolley Loop — last month, extending its service to include stops at key locations in Midtown. Two trolleys are assigned to run a continuous loop, providing access to the densest residential areas of Midtown as well as Piedmont Park.

The service is designed to give both students and city dwellers free transportation options that help interconnect the area in an unprecedented way. Together with the summer movie series Flicks on Fifth, Georgia Tech is making an effort to reach out to the residential population and draw attention to the retail and dining options available at Technology Square.

As a pilot program, the Midtown

Hours of operation

Monday – Friday*	5 - 10 p.m.
Saturday	Noon - 10 p.m.
Sunday	10 a.m. - 6 p.m.

*Trolleys will operate until midnight on Wednesdays until July 27.



Trolley Loop will continue to operate for the next three months. It will be reevaluated as a permanent addition to Tech's trolley service in the fall. More information, including downloadable maps and schedules, is available at www.parking.gatech.edu/midowntrolley.



"Head of a Woman," a lithograph by Elizabeth Catlett, 1967

Ferst Center exhibit to showcase African-American art collection

In collaboration with the National Black Arts Festival, Georgia Tech's Robert Ferst Center for the Arts will host "Celebration and Vision: The Hewitt Collection of African-American Art" from July 15 through September 30, 2005.

The exhibition consists of 55 two-dimensional works of art by 20 artists, and is regarded as one of the most significant collections of African-American art of the 20th century. Bank of America purchased the Hewitt Collection in 1998 from John and Vivian Hewitt.

"We are honored to have the Hewitt Collection visit the Ferst Center this summer," said Jay Constantz, director of the Ferst Center. "The exhibit is one of the most spectacular collections of African-American art in existence, and Georgia Tech is pleased to be able to share it with the community."

The Ferst Center galleries will be open Tuesday through Saturday from 10 a.m. to 6 p.m. and Sundays from noon to 6 p.m. Admission is free. The exhibit will also be a stop on the National Black Arts Festival's popular "Gallery Crawl" on Saturday, July 16, and Saturday, July 23. For more information, visit www.ferstcenter.org or call 894-9600.

Harty, cont'd from page 1

relations strategy for the 1996 Summer Olympic Games. He is also responsible for streamlining how campus media services are delivered. And his commitment to the use of market research has helped shape the development of improved recruiting and promotional materials for raising the Institute's profile on a national and international scale.

"The incorporation of market research into our work has been a major change in how we do our work," he noted. "We are beginning to listen to our audiences far more and have seen a notable change in how people perceive Georgia Tech over the last three years."

In commenting on his departure, Provost Jean-Lou Chameau underscored Harty's role in managing Georgia Tech as a brand.

"Bob made all of us realize that shaping and managing the image of an institution is crucial to its long-term success," he said. "He initiated this process through the Olympics and continued to shape and refine our message since then. In addition, his cool head and good sense of humor

helped us handle the complex situations that arise at any major research university. I will miss him as a friend and colleague."

In fact, many of his contributions centered on increasing name recognition or enhancing the prestige of the Institute. To that end, he helped usher Georgia Tech into the Internet age, overseeing the development of several iterations of its Web site. Other projects, such as the online image database and ICPA toolbox, were designed to make media resources more freely available to the campus community.

In the process, he also became the first communications director to serve on the president's cabinet, lending his expertise on Institute-wide policy discussions and earning the respect of Tech's senior administration officials for his counsel.

"I appreciate the support that I've received from the administration throughout my tenure," Harty said. "I leave Georgia Tech with very good feelings about this place and will continue to follow the Institute's progress with considerable interest. It's been a good, decade-long run. Now it's time to move on."

IN BRIEF:

Digital signal processing receives support from TI

The School of Electrical and Computer Engineering's research efforts in digital signal processing (DSP) got a significant boost recently from a \$1 million, three-year commitment from Texas Instruments (TI). The gift is a continuation of TI's previous three-year commitment of the same amount to support DSP research.

An industry leader in DSP technology, TI has been working with universities on DSP research since the 1980s, creating a formal University Program in 1990 with the goal of facilitating the inclusion of world-class, real-time DSP into electrical and electronic engineering research and curricula. Since the program's inception, more than 1,600 university laboratories worldwide have utilized TI's DSP technology.

"We look forward to the continuation of a very positive and fruitful relationship with the DSP research group," said TI Vice President C. Robert Hewes.

Tech's DSP research group is headed by James H. McClellan, John and Marilu McCarty chair and professor of electrical and computer engineering.

New health systems professional education classes

This fall, Georgia Tech's health systems faculty will launch a series of short courses designed for working professionals in the healthcare industry — from hospital administrators to consultants to mid-level managers and clinicians.

"The healthcare system in the United States is a very complex system, suffering in terms of costs, quality of care, efficiency and productivity — issues which engineers are good at solving," says Francois Sainfort, the William W. George professor of health systems in the School of Industrial and Systems Engineering. "Now is a good time to start bringing engineering solutions to healthcare and to look at ways to re-engineer and redesign the system."

At noon on Aug. 2, Sainfort will offer a free sneak preview of the courses through a live, one-hour webcast.

Courses will be taught at the Global Learning and Conference Center at Technology Square. Detailed information about these courses and the sneak preview is available online at www.emarket.gatech.edu/healthcare.

Campus recreation faculty/staff fees to increase

In response to the growing operating expenses that coincide with its recent expansion, the Campus Recreation Center (CRC) has announced the first increase in member fees for faculty and staff in five years.

As of September 1, monthly dues will increase to \$24. Other membership classes have seen similar increases. Over the past five years, students have stepped up their mandatory fees 47 percent and alumni fees increased to \$30 per month.

Questions or comments should be directed to membership@crc.gatech.edu.

C A M P U S E V E N T S

Faculty/Staff Development

July 11

The Office of Organizational Development and Literacy Volunteers of America offer a class in "English as a Second Language (ESL)," from 1:30-5:30 p.m. in the Custodial Services training room. The program's objective is to provide basic English language communication skills to employees with little or no English proficiency. This class is workplace specific. To register, visit www.trainsweb.gatech.edu or call 894-1146.

July 12

The Office of Organizational Development hosts a 10-week session of "Workplace Spanish Level I," held from 12:30 - 2 p.m. in room 208, Savant Building. Participants will learn vocabulary and expressions specific to their individual needs on the job. To register, visit www.trainsweb.gatech.edu.

July 14

The Office of Organizational Development hosts a 10-week session of "Workplace Spanish Level II," held from 12:30 - 2 p.m. in room 208, Savant Building. This course will concentrate on increasing vocabulary and verb tenses for acquiring some fluency in speaking and comprehending Spanish. To register, visit www.trainsweb.gatech.edu.

July 26

The Office of Organizational Development offers a one-day class in "Proofreading Made Easy," in room 308, Savant Building. To register, visit www.trainsweb.gatech.edu.

July 28

The Office of Organizational Development offers a one-day class in "Business Writing Skills," in room 308, Savant Building. To register, visit www.trainsweb.gatech.edu.

Ongoing

Faculty, staff, alumni and graduate students are invited to join Georgia Tech's chapter of Toastmasters International, which meets every Thursday at 7:30 a.m. in room 102 of the Petit Microelectronics Research Center. For more information, visit www.techmasters.gatech.edu.

Miscellaneous

July 6-7

A representative from TIAA-CREF will be on campus conducting one-on-one financial consultations. To schedule an appointment, call 800-842-2003 or visit www.tiaa-cref.org/moc.

July 12

The deadline to submit applications for the 2005 Mentor Tech program. For more information, call 894-3850 or 894-2249.

July 15

The deadline to submit applications for the Masters Series executive development program. For more information, call 894-8340 or visit www.mastersseries.gatech.edu.

July 15

The deadline to submit Fall semester applications for both the TAP and STRAP tuition assistance programs. Send applications to Kimberly Porter in the Office of Organizational Development, mail code 0206. For more information, call 894-2249.

Aug. 22

Fall semester classes begin.

The Whistle is on a biweekly publication schedule during the summer semester. The next issue will be published on July 18. E-mail all calendar events to editor@icpa.gatech.edu.

C L A S S I F I E D S

AUTOMOBILES

1990 Cadillac Brougham. Excellent condition. Low mileage for its age. Brown with leather interior. Loaded. \$2,500 firm. Call 894-1108 or e-mail vincent.pierotti@housing.gatech.edu.

1995 Nissan Maxima GLE in very good condition, dealer maintained, leather seats, sun roof, automatic, air, Bose stereo. 118K miles. \$4,700. E-mail bfcusa@bellsouth.net.

1996 Volvo 850 Turbo, 94K miles. Single owner, maintenance records, Great condition. Automatic, sun roof, ABS, a/c, cruise, dual front air bags, cassette stereo, alloy wheels. \$6,500. Call 894-4378 or e-mail sri@mgmt.gatech.edu.

1999 Jeep Grand Cherokee. Loaded, 74K miles. Six-CD changer w/premium sound. 100K-mile extended warranty. Retail for \$13,000, selling for \$11,500. Call 894-3373 or e-mail monique.lett@housing.gatech.edu.

2000 BMW 528i. Premium sport package, grey, 51K miles, all extras, excellent condition, \$22,500, Call 404-875-6704 or e-mail dwebster@ce.gatech.edu.

FURNITURE

Bunk bed, solid wood w/3 drawers, mattresses included, \$200. Small desk w/corner shelf unit and chair, \$100. Call 404-378-1548 or e-mail dlmsmc@bellsouth.net.

Leather sofa and love seat. Cream colored, perfect condition. Both for \$400. Picture available. E-mail miriam.golob@ssc.gatech.edu.

Girl's bedspread ensemble. Twin spread, sham, dust ruffle, curtains and two sets of sheets. Beautiful lime green and royal blue tulips on white. Paid more than \$200; asking \$75. Call 894-3325.

REAL ESTATE/ROOMMATES

3BR/1.5BA in East Lake neighborhood with a YMCA, walking distance to Oakhurst, less than 10 min. to downtown Decatur, easy access to Downtown and Midtown. \$224,900. Call 404-371-9078.

2BR/1BA apartment, fully reconditioned, central heat and air, W/D. Covered deck, and off-street parking. 631 Seminole Ave. \$990/month. Call Jeanette, 894-9245.

Fully furnished downtown 1BR condo. Cable, DSL, gas, electric paid with association fee. Pre-paid parking. 24/7 concierge. 10-year tax abatement. \$115,000. thewilliamoliver.com. Call 404-255-9249 or e-mail omaar-keiko@netscape.com.

2BR/2.5BA townhouse in Norcross. Basement and one-car garage. Six years old. Ideal roommate plan. Very clean and well maintained. \$139,900. Owner may pay part of closing cost. E-mail ed30@mail.gatech.edu or call 770-368-8017.

4BR/2BA house on Lake Avondale, 8 miles from Tech. LR, DR, secluded office/hobby room, 2-car garage, eat-in kitchen, mudroom/laundry, large lot. \$439,000. Call Angie, 404-299-5259.

1BR/1BA condo in Cross Creek. 12 min. from GT. Wood floors, new Berber carpet. Golf, tennis, pool,

gated community. W/D. \$125,000. Call 894-3476 or e-mail mercedes.saghini@arch.gatech.edu.

3BR/2BA new house for rent on Campbellton Road in Ben Hill area. New appliances, large back yard, quiet area. Call 404-699-0589.

3BR/2.5BA home in Decatur. Huge kitchen with granite counter tops, fireplace, hdwd floors, plantation shutters. Two Charleston-style porches, fenced-in back yard, storage shed, walk to Oakhurst Village. Call 404-210-4572.

Going on sabbatical? Leaving town for a while? I am looking to sublet or house sit from June 2005 - May 2006 or any time in that range. Can care for pets and do yard work. Call Sarah, 894-2421 or e-mail sg201@mail.gatech.edu.

3BR/2BA house on 1/2 acre in Douglas County. Located in very quiet swim/lake community. Close to I-20, and Publix. Rent for \$1,100/month. Call 404-358-0322.

2BR/2.5BA Buckhead condo in golf, swim, tennis, gated community. Off I-75, 10 minutes to GT, minutes to finest dining and shopping. \$1,000/month. Call 404-414-1232.

2BR/1BA house in Midtown West close to GT, Buckhead, downtown. Just renovated: hardwoods, tile, new plumbing, HVAC, windows. Quiet street, private back yard. Call 404-325-3449.

4BR/3BA house in Morningside. Listed for sale but will consider lease purchase. Great schools, walk to VaHi & parks. See www.showing247.com/

761sanantonio/fmls.html. Call 404-325-3449.

MISCELLANEOUS

46-inch rear projection RCA Home Theater, \$250 OBO. Currently not in working order. Buyer must pick up. Call 894-1028 or e-mail robert.gregor@ap.gatech.edu.

Snapper Hi-Vac riding mower, 28-inch, mulch kit, EZ-drain oil valve, model M280919B, used fewer than 80 hours. Paid \$1,200, sacrifice for \$750. Call 894-6221.

Pink ipod Mini, \$125. Call Ms. King at 385-2382.

Full-breed American Pit Bull Terriers (No papers). 12 weeks old. All have received first set of shots. Call 404-798-4503.

Free dog: Fergus is a great 50-lb. short-haired white dog. We have an allergic infant so we can't keep him. See www.prism.gatech.edu/~sp119 or call Sean at 678-895-8096.

Seeking a Jamaican native to teach Patwa; will pay \$8/hr. for lessons 2 days/week. Call 770-369-0378.

Horses for sale, pictures upon request. Appaloosa, Tennessee Walkers, \$600-\$1,500. Call 894-3680 or e-mail charles.twiggs@gttri.gatech.edu.

Brand new Douglas touring tires. Size 215/60/16, all four for \$100. E-mail erica@ece.gatech.edu.

E-mail ads to editor@icpa.gatech.edu.