Georgia Tech Research Institute
A Newsletter from Georgia Tech Research Institute
GTRInsider
Summer 2006

Georgia Tech Opens Research Institute in Ireland

New Institute Will Focus on IPTV, RFID, Medical Devices and Sustainable Energy

The Georgia Institute of Technology and the Georgia Tech Research Institute (GTRI) have expanded their global reach with the opening of a research institute in Athlone, Ireland. The new institute, which opened its doors in mid-June 2006, will focus on four technology areas that mirror Ireland and Georgia Tech's research strengths — digital media, radio frequency identification (RFID), biotechnology and energy.

Georgia Tech Ireland (GT Ireland) will be GTRI's first applied research facility outside the United States. Over the next five years, the Irish operation plans to build up a portfolio of research programs and collaborations with industry valued in excess of $24 million, and at full operation, it expects to employ 50 highly qualified researchers.

GTRI, which conducts more than $140 million in research and development annually for industry, government and academic institutions across the world, is launching this new enterprise with support from IDA Ireland, the agency responsible for industrial development and overseas investment in Ireland.

"Ireland is increasingly known as a world leader in innovation and for embracing technology. As Georgia Tech expands its global horizons, we seek partners who share our values and goals," said Georgia Tech President Wayne Clough. "Thus, we are especially pleased to celebrate the formation of this forward-looking collaboration with Ireland and our Georgia Tech Research Institute. We are grateful to the government and civic leaders of Ireland who worked on this exciting initiative with us."

Dr. Wayne Clough unveils the plaque officially opening Ga Tech Ireland. L to R: Cllr. Kieran Molloy, Dr. Clough, Brian Cowen (Minister for Finance), Sean Dorgan (CEO of IDA).

The institute will work closely with Irish corporations and universities, the Georgia Tech research community and U.S. companies to provide companies on both sides of the Atlantic with industry-focused research and development that bridge the gap between academic discovery and commercial success.

"I'm delighted to be celebrating the official opening of GT Ireland, a unique and innovative institute for Athlone," said Ireland's Minister of Finance Brian Cowen. "This international Applied Research Institute will be a critical component of Ireland's R&D infrastructure."

Dr. Stephen E. Cross, Georgia Tech vice president and GTRI director noted, "GT Ireland is an integral part of GTRI's plan to develop international operations and build long-term relationships with industrial partners by providing innovative

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OHR/Benefits Cobb County Fair

Monday 10/09/06 Mark your Calendar 11 a.m.- 1 p.m.

- Cobb Auditorium, Building 1
- Teacher's Retirement will be represented by a lead TRS counselor.
- ORP retirement carriers, 403 representatives and other benefit companies will be present.

Please take a few minutes and come by for information regarding open enrollment 2007.

If you have requests, comment or suggestions, e-mail linda.mitchell@ohr.gatech.edu

Mentor/Mentee graduates, L to R.
FRONT ROW: David Parekh, Reid MacTavish, Jason Nadler, Ben Medlin, Ryan Hersey.
BACK ROW: Steve Cross, Ben Poole, Chris James, Chris Spivey, Tanah Barchichat, Brad Pitt.
(Steve, David, and John are not graduates .

The *GTRInsider* is a quarterly publication created for employees and friends of the Georgia Tech Research Institute. It is produced by the GTRI Communications Office, with additional content provided by GTRI departments and labs. We welcome your comments and suggestions. If you have information or story ideas you would like to submit for consideration, please complete the form on the back cover of this newsletter or e-mail your submission to the GTRI Communications Office at CommInfo@gtri.gatech.edu

Director's Notes..

The Leadership Foundation for GTRI's Future

Over the past few months many leadership changes have occurred at GTRI. Change is never easy - only parking meters and babies really like it – but I'm excited that we have recently filled some of our vacant GTRI leadership positions with exceptional people who are committed to helping our organization have even greater impact.

On September 1st, Lisa Sills became GTRI's new Deputy Director of Support Operations and Tom McDermott became lab director of ELSYS. Earlier this year, Bill Melvin took over as Director of SEAL. These are three key positions filled by people who see great potential in GTRI and who will work to maximize it. In addition, Charlie Brown was called upon to serve in an important new leadership position in the Provost's office to support all of GT, including GTRI. GTRI leaders are recognized and often called upon to support the entire institute.

Let me briefly mention the qualities I want in those who fill senior leadership positions at GTRI. I've talked about these qualities a lot since I've been here and I see them in Lisa, Tom, and Bill. They are exceptional role models with tremendous talent and technical expertise. They also have fresh ideas; clear goals and an unswerving commitment to helping everyone at GTRI and Georgia Tech achieve success. Leaders recognize that success is not achieved in a silo – but rather as a team working together to achieve common goals. Simply put, the leadership model I want to embed throughout GTRI is based on service – what is sometimes called servant leadership. I firmly believe that GTRI's new leaders possess the qualities and abilities needed to serve GTRI and, through their service, to ensure GTRI is a strong and vibrant research organization in the years to come.

GT President Wayne Clough recently appointed a new leader to his team. Dr. Gary B. Schuster was named the new Provost. Gary is well known as a leader, outstanding researcher, and innovator. I had the honor of serving on the Provost Search Committee that nominated Gary for this position and Gary, in his previous position as the Dean of the GT College of Sciences, chaired the committee that led to my selection as VPDIR. We have worked together closely on several projects in the past three years. I look forward to Gary's leadership and enthusiastic support for GTRI.

Stephen E. Cross

Dr. Stephen E. Cross
Vice President, Georgia Tech
Director, GTRI

Discover GTRI

September 27 - 11:00 a.m.–3:00 p.m. in the Student Center Ballroom

Discover GTRI showcases GTRI research opportunities to the GT campus with hopes of recruiting exceptional co-ops, interns and other student positions. The Personnel Support Team is reviewing the response to last year's promotion to ensure we inform as many students as possible about the event.

Refreshments will be provided for participants, as well as information tables for GTRI's technical recruiter and Georgia Tech's Division of Professional Practice. Laboratory directors are encouraged to send their best employees (including student employees) to represent their laboratory in an individual breakout room. This is a great opportunity to highlight special projects, provide demonstrations and talk one-on-one with students after they register in the ballroom.

Several GTRI student employees have mentioned that this event was their first introduction to GTRI. We want to continue to spotlight GTRI to the Georgia Tech campus.

For more information contact Suwana Murchison at suwana.murchison@gtri.gatech.edu

> Up Close and Personal With...

Micah Abraham Zebulon Wedemeyer

Working For:
ELSYS

Work Location:
CRB - Phoenix Foundation (where MacGyver works!)

GTRI Employee Since:
August 2004

Most Memorable Job Experience:
Discussing video game strategies with Rod Beard. He's actually quite ruthless.

What I Like Most About My Job:
The people I work with. Finding so many people with a great sense of humor is very rare, especially in the tech world.

If I Won The Lottery, I Would:
Buy a boat, sail into international waters, and finally do all the fun stuff that is illegal in civilized society. Oh, and feed starving children or whatever.

Most Favorite Food:
Corn all the way. I'm a true Iowan.

Something You Probably Didn't Know About Me:
I've been a Dungeons and Dragons player for 15 years, and I probably will be one until the day I reach -10 hit points, or "die" as non-D&D people call it.

Something Else You Probably Didn't Know About Me:
My wife married me after she knew I was a Dungeons and Dragons player.

People Tell Me I Resemble:
People used to say I looked like Beavis, but I quit bleaching my hair. Since then, I guess I've become pretty generic. Maybe I should start bleaching it again.

If I Could Pick Someone Out Of History To Have Lunch With, I Would Choose:
Some lowly peasant from the Dark Ages. I bet those guys could use a hearty meal. Besides, I'm sure most famous people would be a let down.

Three Words That Describe Me Best:
Can't Be Serious

All Time Fav Movie:
Bill and Ted's Excellent Adventure

Recent Book Read:
Harry Potter and the Order of the Phoenix. My take: Harry Potter is the ultimate teacher's pet. He needs to get knocked down a notch or two.

If you'd like to nominate a colleague to be featured in the next 'Up Close and Personal With…' please see the form on the back of this issue of the *GTRInsider*.

Bill Melvin Tapped to Lead GTRI Laboratory

Radar engineer will head Sensors and Electromagnetic Applications Lab

The Georgia Tech Research Institute (GTRI) has named William Melvin as director of its Sensors and Electromagnetic Applications Laboratory (SEAL). He replaces Robert N. Trebits, who retired in May after a distinguished 35-year career with GTRI, including 15 years as director of SEAL.

An expert in signal processing and aerospace radar systems, Melvin has been with GTRI for eight years, most recently as director of SEAL's Adaptive Sensor Technology Project Office.

Melvin's research has led to three U.S. patents on adaptive radar technology, and he has authored more than 120 technical articles appearing in journals, conference proceedings and government reports. He holds a Ph.D. in electrical engineering from Lehigh University and is an active member of the Institute of Electrical and Electronics Engineers (IEEE). This spring Melvin was named the "Young Radar Engineer of the Year" by the IEEE Radar Systems Panel of the Aerospace and Electronic Systems Society.

"Bill Melvin will be an outstanding laboratory director," said Stephen E. Cross, GTRI's director and a vice president of Georgia Tech. "In addition to a keen intellect, he possesses the kind of leadership qualities that Jim Collins cites in "Good to Great," such as personal humility coupled with tremendous drive and commitment to the organization. Bill is a hard worker and is well respected by his colleagues at GTRI and Georgia Tech as well as in our stakeholder communities."

At SEAL, researchers focus on developing radio frequency (RF) sensors, which includes radar, electromagnetic environmental effects and antenna technology. "Our mission is to contribute to the country's defense, security and well-being by solving complex sensor problems," Melvin explained.

"These are exciting times for radar, as a lot has changed in the past 15 years," Melvin continued. "It used to be that radar systems directed energy into the skies in their search for Soviet aircraft. Today we're pointing radar systems toward the Earth to provide defense and intelligence communities with information on all types of ground threats."

That presents a challenge to make radar systems more effective. For one thing, today's radar systems must operate in environments with increasingly complex interference, contending with site-specific clutter and man-made objects. What's more, spectrum has diminished due to the growing number of wireless devices, such as cell phones and wireless LANs.

Another emphasis at SEAL is signal processing techniques, which use complex algorithms to process data from RF receive elements. "We're trying to make radar bang up against the laws of physics," Melvin said, referring to radar systems that can look through walls and map the interiors of buildings. "To do that, we need to extract as much information as possible out of the data that a system receives."

SEAL lab director Bill Melvin

Key units at SEAL include:

- **Radar Systems Division**, develops air-to-ground and space-to-ground sensors. Important areas include electronic protection (anti-jamming), adaptive sensor technology and life-cycle management (helping the government maintain radar systems by identifying shortcomings and developing new parts or upgrades).
- **Air and Missile Defense Division**, develops sensors for ballistic missile defense. Among areas of expertise are antenna engineering, tracking and sensor fusion.
- **Electromagnetic and Antennas Division**, investigates both new and existing threat systems for the intelligence community and explores electromagnetic effects and antenna design and measurement techniques.
- **Tactical Weapons and Sensors Project Office**, develops sensors for tactical weapons systems that support military troops on the ground. Launched in 2004, the TWSPO office is a highly specialized area that Melvin hopes to grow.

Although the defense community benefits greatly from SEAL's work, the lab is also pursuing related radar technologies for applications in air traffic control, vehicle safety, site intrusion detection and healthcare. In highway safety, for example, radar systems could be used to keep cars at safe distances.

"Radar is a highly multidisciplinary field, and SEAL has a great team of subject matter experts," Melvin said. "By pooling their talent, we can develop highly innovative, end-to-end solutions that best meet our customers' requirements."

Orlando Field Office

In 2001, GTRI opened a Field Office in Orlando, Florida, because Orlando is the center for Department of Defense Modeling, Simulation, and Training (MS&T) Technologies. The Orlando Field Office (OFO) helps provide GTRI direct and regular access to the dynamic MS&T marketplace, highlights GTRI as a committed potential teammate, allows timely and focused responses to opportunities, and facilitates collaboration on future opportunities.

The Orlando business environment includes MS&T players from all Services, programs from several Combatant Commands, and Homeland Security/Federal Law Enforcement offices. The United States Army offices in Orlando include the Program Executive Office for Simulation, Training, and Instrumentation (PEO STRI); the Army Research Institute (ARI); and the Research Development and Engineering Command Simulation Training Center (RDECOM STC). The United States' Navy NAVAIR Orlando Training Systems Division (TSD) and the United States Marine Corps' Program Manager for Training Systems (PM TRASYS) are in Orlando too. The Air Force Agency for Modeling and Simulation (AFAMS) is a Field Operating Agency in Orlando working for the Secretary of the Air Force, and other Air Force customers near Orlando include the Eastern Space Range and the Air Force Technical Applications Center near/at Patrick Air Force Base. The Defense Intelligence Agency also has offices at Patrick Air Force Base. The National Aeronautics and Space Administration at Kennedy Space Center is nearby. The National Center for Forensic Sciences (NCFS), a Federal Law Enforcement Training Center (FLETC) Liaison Office, and a United States Coast Guard MS&T office are in Orlando. MS&T programs for Combatant Commands such as Special Operations Command (Tampa), Central Command (Tampa), Southern Command (Miami), and Joint Forces Command (Suffolk) are developed in Orlando.

The MS&T programs in Orlando are supported by almost 200 industry partners, and approximately 130 of these MS&T industry players are part of the National Center for Simulation (www.simulationinformation.com) being managed from Orlando. The National Center for Simulation (NCS) is a member-supported non-profit organization formed in 1993 as the link between defense industry, government, and academia on behalf of the entire MS&T community.

The OFO is in a very convenient location with ample free parking located at 3361 Rouse Road, Suite 210, Orlando, Florida 32817. This location is approximately 20 miles from the Orlando International Airport (OIA) and 1 mile from the Orlando Research Park that houses PEO STRI, ARI, RDECOM STC, NAVAIR TSD, PM TRASYS, AFAMS, Coast Guard, FLETC, NCFS, and NCS offices. Many restaurants and hotels are nearby. The OFO has two extra offices furnished for visiting or assigned researchers, classified capability up to and including Secret, a wireless network, a private briefing room that holds up to 15, and an open classroom that holds 12 at tables.

Steve "Flash" Gordon,
Orlando Field Office manager

The Orlando MS&T marketplace is growing. With the final new construction being completed in the original Research Park area, Research Park II will be started in 2007. It will be located about 12 miles south of the current Research Park and within a few miles of the OIA. A new University of Central Florida Medical School, Veterans Administration Regional Medical Center, and a State/Federal Medical MS&T Laboratory are planned in or adjacent to Research Park II.

The OFO staff includes Ms Melissa Schmidt, Melissa.Schmidt@gtri.gatech.edu, 407-482-1423, cell 321-354-4138; and Dr Steve "Flash" Gordon, Steve.Gordon@gtri.gatech.edu, 407-482-1423, cell 407-963-2413, cell 407-592-1951. They look forward to supporting you in any way possible, including introductions and visits to potential government customers or industry teammates. Please feel free to contact them.

Melissa Schmidt, Flash's "right-hand"

So…Do You Want to be Awarded? The GTRI Awards Council can Help!

By Marie Little, DDO

Our research peers, potential customers, and even prospective employees judge us based on our reputation within the technical community. Many Georgia Tech Research Institute scientists and engineers have received national and international recognition through awards, honors, and elevated level of membership, including the distinction of Fellow within their respective societies, such as IEEE, AIAA, SPIE, etc. If you think you are ready to join their ranks – the GTRI Awards Council can help!

Since its inception in 1996, the GTRI Awards Council has served to encourage and assist qualified candidates in pursuing many prestigious recognitions and to provide guidance to young professionals. The Council encourages awards/honors in all professional organizations in which the GTRI staff is active, including the IEEE, AIAA, OSA, SPIE, AOC, ITEA, AOC, and others.

The mission of the GTRI Awards Council is "to encourage and promote involvement of current and former GTRI employees in professional organizations and recognition through such organization". The Council exists to identify GTRI researchers qualified for nomination and other professional recognition, and accepts nominations or recommendations from any member of the GTRI staff. Awards Council members can also provide the criteria for appropriate professional or technical field awards and other honors upon request.

A nominator generally works closely with the nominee and prepares the first draft of the nomination package. Once a draft is available, the Council will appoint several reviewers to provide suggestions and comments to insure we submit the strongest package possible. Council members also serve as nominators when necessary and work to ensure that researchers receive appropriate internal and external recognition.

Current Members of the GTRI Awards Council Members are:

Dr. Gary G. Gimmestad (EOSL) - Chair
Dr. Krishan K. Ahuja (ATAS)
Mr. H. Mike Harris (EOSL)
Ms. Marie Little – (VP/DIR)
Dr. Les Pickering (STL)
Dr. Edward K. Reedy (VP/DIR Emeritus)
Mr. Rusty Roberts (ITTL)
Ms. Kathy Schlag (ELSYS)
Dr. James C. Wiltse (AO)

More information about the Awards Council and professional society awards programs can be found at: http://www.gtri.gatech.edu/awards. We are currently updating our WebWISE information to include links to additional professional societies and deadlines for upcoming awards programs.

Please contact any Council member to submit a nomination or recommendation, or for further information or assistance with a nomination package.

Dr. James C. Wiltse (SEAL) (Above, Left) was selected as a Fellow of the International Society for Optical Engineering (SPIE) and was honored with this recognition by SPIE President Paul McManamon (above, right) at the SPIE Defense and Security Symposium in Orlando, FL in April, 2006. Jim was recognized for specific achievements in the theory and application of large-aperture Fresnel zone plates at terahertz- and millimeter-wave frequencies.

GTRI Seeks Alternative Funding

Fall is around the corner and with the change in seasons comes Tech's annual fundraising Roll Call solicitation. If you have already contributed, thank you! If you have not yet made a gift, please consider designating GTRI as the beneficiary of your gift. You can select from any one of the following accounts. (If you give online put the account number in the "special instructions" box.) Payroll deduction is an easy way to make a commitment.

As we look to the future, philanthropy will play a larger role in providing an alternative revenue source to allow GTRI to fulfill its mission. In the months ahead you will hear more about fundraising plans including a capital campaign and the addition of dedicated fundraising staff working exclusively for GTRI. Increasing employee giving is the first step in our fundraising plan. Outside funders often look at internal giving as a way to determine their own level of support. Please consider making a gift and giving generously. Thank you.

GTRI Accounts

GTRI General Fund	351172
Dental Technology Research Center	357569
Junior Research Leader Program	352993
Shackelford Fellows Program	352994
Research Equipment Facilities	352995

Donate Online: http://gtalumni.org/site/Page/FacultyCodes

GTRI Internal Research and Development – Round 1 FY 2007

Based on the recommendations of the GTRI Fellows Council, the following **GTRI Exploratory Internal Research** proposals have been approved for FY 07.

Title	Principal Investigator
Carbon nanotube functionalized fabrics	Jud Ready (EOSL)
3D periodic nanostructures	Jason Nadler (EOSL)
Automatic dependent surveillance-broadcast (ADS-B) for UAV operations	Mike Heiges (ATAS)
Salivary Diagnostics	Jennie Houlroyd (HESL) Valerie Sitterle (ITTL)

The following **GTRI Sustaining Internal Research** proposals have also been approved for FY 07.

Title	Principal Investigator
Simulation-Centric Model-Based Systems Design & Development for Embedded Applications (Year 2)	Barry Bullard (HRL)
Mission Systems Testbed (Year 2)	Joe Brooks (ELSYS)
Systematic Performance Analysis and Visualization of Ballistic Missile Defense System Effectivemenss (Phase 1)	Dale Blair (SEAL)
ALQ-213/AIDEWS Integration Demo	Mike Willis (ELSYS)
Smart Munitions Simulation Enhancements	Mike Heiges (ATAS)
Real-Time GTSIMS (RT-GTSIMS) Synthetic Image Generation	Al Sheffer (EOSL)
Conical-Scan Near-Field Antenna Measurement System	Dan Leatherwood (SEAL)

GTRI sincerely appreciates the interest and ideas expressed by all of our research staff that submitted proposals this round. Note that the deadline for the second round proposals will be December 1, 2006. FY07 Round Two awards are expected to be announced in January 2007.

The Georgia Tech Faculty Women's Club

www.gtfwc.gatech.edu

The new academic year is underway and the Georgia Tech Faculty Women's Club (GTFWC) extends warm greetings to all administrators and faculty members (academic, research, and general). Whether your position is new or long-standing at Tech, you and/or your spouse should know how GTFWC helps to enhance the GT and Atlanta experience.

In existence for eighty-five years, The GTFWC provides women valuable networking opportunities through planned monthly activities, interest groups, and volunteer opportunities. The GTFWC also sponsors scholarships for qualified undergraduates with a parent working in any capacity at Georgia Tech.

Programs for the 2006-2007 academic year begin with the September 20th OPEN HOUSE at the President's home, 292 Tenth Street NW, 11am-1pm.

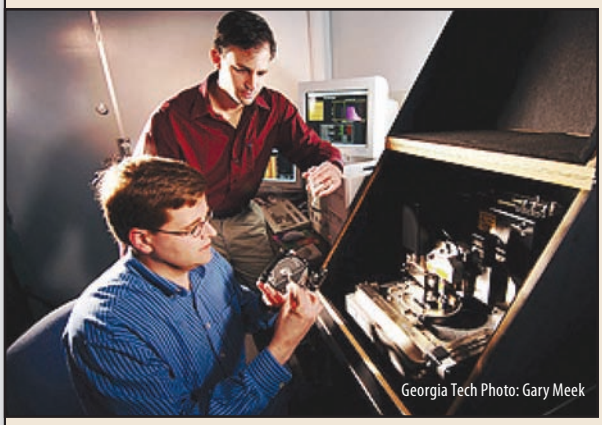
Whether you are new to Georgia Tech, or if your schedule now allows the time to participate in GTFWC, you are enthusiastically invited to the Open House. GTFWC is pleased that in recent years membership includes faculty who support our programs and attend when possible. Thanks to all current members who have personally invited new spouses and faculty met over the summer months.

Please check September issues of The Whistle for reminders and www.gtfwc.gatech.edu for complete GTFWC information and history. A membership application is provided on the reverse side.

Questions? Call Carole Teja (404-643-2354) or Sue Cross (404-249-8894).

GTRI Research Notes

Protecting Sensitive Data: Fail-Safe Techniques for Erasing Magnetic Storage Media



Senior Research Technologist Christopher Shappert (standing) and Senior Research Scientist Michael Knotts image a hard disk drive platter using magnetic force microscopy.

After a U.S. intelligence-gathering aircraft was involved in a mid-air collision off the coast of China four years ago, the crew was unable to erase sensitive information from magnetic data storage systems before making an emergency landing in Chinese territory.

That event underscored the need for simple techniques to provide fail-safe destruction of sensitive data aboard such aircraft. Working with defense contractor L-3 Communications Corp., scientists at the Georgia Tech Research Institute (GTRI) have developed a series of prototype systems that use special high-strength permanent magnets to quickly erase a wide variety of storage media.

Developed so far for VHS tapes, floppy drives, data cassettes, and small computer hard drives, the techniques could also have commercial applications for banking, human resource and other industries that must also protect sensitive information.

"This is a very challenging problem," said Michael Knotts, a research scientist in the GTRI's Signature Technology Laboratory. "We had to verify that the data would be beyond all possible recovery even with unlimited budget and unlimited time. Commercial devices on the market for data erasure just couldn't fill the bill, because they were magnetically too weak, they were physically too large and heavy, or they didn't meet stringent air safety standards."

During the project, the researchers developed testing procedures that use a magnetic force microscope (MFM) – a variation on the atomic-force microscope (AFM) more commonly used to provide detailed images of surfaces at the nanometer scale. The MFM mapped the very small magnetic perturbations created by data stored on the media, helping determine how well data patterns had been destroyed.

"If you erase the data by whatever means, you should see a surface devoid of any specific pattern or periodicity," Knotts explained. "Our goal was to see a random distribution of magnetization that would indicate a clean disk."

Link to full article: http://gtresearchnews.gatech.edu/newsrelease/erase.htm

All-Weather Landing: GTRI Studies Radar That Helps Low-Visibility Landing

GTRI researchers are investigating the use of millimeter-wave imaging radars that would allow aircraft crews to generate a pilot-perspective image of a runway even in zero-visibility conditions.

Aircraft facing low-visibility conditions have traditionally been dependent on ground-based navigational aids to guide them to a safe landing. Even then, there were limits on the visibility conditions under which pilots were allowed to land.

Georgia Tech Research Institute (GTRI) research engineers are investigating the use of millimeter-wave imaging radars that would allow aircraft crews to generate a pilot-perspective image of a runway area even in zero-visibility conditions and without ground support. Such a radar could be combined with other sensors to provide a sensor suite that could help aircraft land in virtually any condition.

"The Air Force wants to field an onboard system that allows aircraft to land in any type of weather condition, whether it be rain, fog, snow, a dust storm, day or night." says Byron Keel, a research scientist with GTRI's Sensors and Electromagnetic Applications Laboratory.

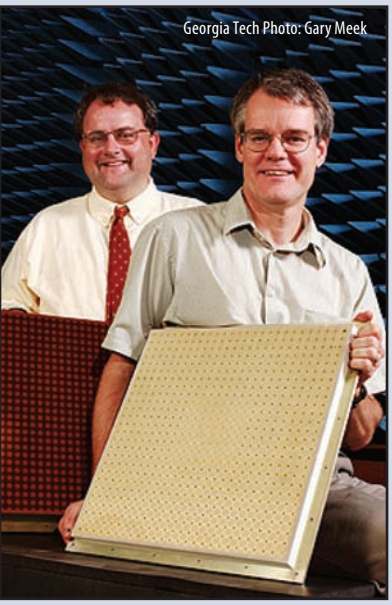
Called the Autonomous Approach and Landing Capability Program, the project is directed by the Air Force Research Laboratory at Wright-Patterson Air Force Base for the Air Mobility Command, and is funded by the U.S. Transportation Command. GTRI is working collaboratively with BAE Systems, MMCOM Inc. and Goleta Engineering and the Air Force Research Laboratory.

The U.S. Air Force is interested in autonomous-landing technology for several reasons. In Europe, where U.S. forces often prepare for a deployment, dense fog conditions can prevent landings for days. Moreover, when U.S. planes land in primitive areas, they can face a range of unpredictable landing conditions.

Link to full article: http://gtresearchnews.gatech.edu/newsrelease/radar-landing.htm

Special thanks to the Georgia Tech Research News and Publications Office for the following stories.
For more information about these stories and other GTRI research please visit us online at www.gtri.gatech.edu.

100-to-1 Bandwidth: New Planar Design Allows Fabrication of Ultra Wideband Phased Array Antennas



GTRI researchers James Maloney (left) and Paul Friederich display prototype panels of a new ultra-wideband antenna.

By taking advantage of a phenomenon that earlier designers had struggled to avoid, engineers at the Georgia Tech Research Institute (GTRI) have developed a new approach to phased-array antenna design that could allow a single ultra-wideband device to do the job of five conventional antennas.

The "Fragmented Aperture Antenna," a computer-designed planar system, has already demonstrated a 33-to-1 bandwidth – well beyond the 10-to-1 ratio achieved by conventional designs. The researchers believe they can extend that range to at least 100-to-1 for use in radar and communication applications.

"Phased array antennas take up space, and if you must have a different antenna for every function – communications, radar and other tasks – the space required can be considerable," noted Paul Friederich, a principal research engineer in GTRI's Signature Technology Lab (STL). "On any military platform, space is at a premium. Our antenna can replace five conventional antennas, which would reduce the weight and volume required for antennas."

The GTRI ultra-wideband antenna would also have applications in most Department of Defense agencies. Current ships must carry dozens of antennas – a problem for all ships, especially submarines. Aircraft have limited surface area for antennas, with weight always a concern. Ground vehicles and even individual soldiers could benefit from reducing the number of antennas they must carry, Friederich noted.

Because it is flat and can be conformed to surfaces, the new antenna design could also have commercial applications, Friederich noted.

Key to the new GTRI design was taking advantage of electronic interaction between antenna elements known as "mutual coupling." For years, antenna designers had been taught to minimize this interaction. But with their detailed computer modeling, the GTRI engineers realized they could take advantage of it by electrically connecting the elements.

Link to full article: http://gtresearchnews.gatech.edu/newsrelease/wideband.htm

Flying on Hydrogen: Georgia Tech Researchers Use Fuel Cells to Power Unmanned Aerial Vehicle

Thomas Bradley and Reid Thomas go through the procedure of starting up the fuel cell aircraft during a test flight at the Atlanta Dragway.

Georgia Institute of Technology researchers have conducted successful test flights of a hydrogen-powered unmanned aircraft believed to be the largest to fly on a proton exchange membrane (PEM) fuel cell using compressed hydrogen.

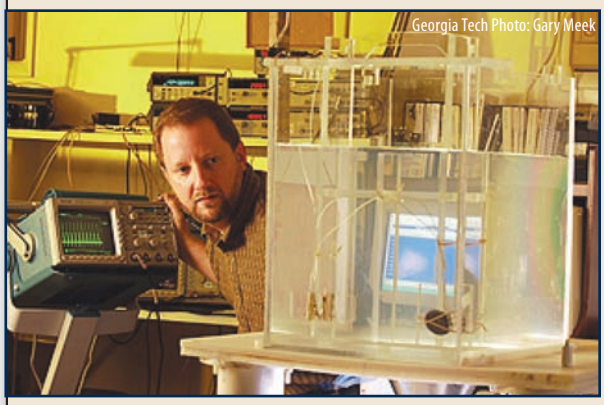
Though fuel cells don't produce enough power for the propulsion systems of commercial passenger aircraft, they could power smaller, slower vehicles like unmanned aerial vehicles (UAVs) and provide a low cost alternative to satellites. Such UAVs could also track hurricanes, patrol borders and conduct general reconnaissance.

The project is a collaboration between the Georgia Tech Research Institute and the Georgia Tech Aerospace Systems Design Lab. In addition to an upcoming presentation at the Society of Automotive Engineers meeting, the researchers presented papers earlier this year at meetings held by the American Society of Mechanical Engineers and the American Institute of Aeronautics and Astronautics. The project is supported with internal funding from GTRI, along with grants from the National Aeronautics and Space Administration (NASA) and the National Science Foundation (NSF).

Link to full article: http://gtresearchnews.gatech.edu/newsrelease/fuel-cell-aircraft.htm

GTRI Research Notes

Improving Medical Devices: Georgia Tech Research Center Expands Testing Capabilities to Help Reduce Potential Interference



GTRI Senior Research Engineer Ralph Herkert monitors the output of a pacemaker in the Georgia Tech EAS/Medical Device E3 Test Center. The device is shown in the Center's torso simulator, which replicates the electrical characteristics of body tissue and fluid using a configuration that mimics implantation in the body.

In our increasingly wireless world, the air is full of electromagnetic signals carrying data from one place to another. While these new technologies advance our options in security, commerce and entertainment, they also produce potential interference that may cause concern for people with implanted medical devices.

One source of potential interference is the electronic article surveillance (EAS) systems that help retailers, libraries and other establishments prevent theft and track inventory. Also, early signs suggest potential concerns from the radio-frequency identification (RFID) systems that are now coming into more widespread use.

Georgia Tech's EAS/Medical Device E3 Test Center helps manufacturers improve compatibility between implantable medical devices and systems that radiate electromagnetic energy. The Center, which has focused on EAS systems for more than a decade, has recently expanded its operations and facilities to test new types of security and logistical systems – including RFID systems.

Link to full article: http://gtresearchnews.gatech.edu/newsrelease/eas-center.htm

Danger in the Sky: Researchers Developing Better Air Defense Systems for U.S. Aircraft

Engineers from the Georgia Tech Research Institute design and develop substantial components of the integrated defensive avionics systems of the C-130 Hercules transport, shown here.

Many of today's U.S. military aircraft entered service decades ago, and keeping them mission-ready can be a challenge.

U.S. military aircraft face ground-based anti-aircraft dangers in several parts of the world. Georgia Tech Research Institute (GTRI) engineers are helping U.S. airplanes and helicopters to avoid enemy missiles and ground fire and to respond with effective defensive measures if attacked.

GTRI designs and develops substantial components of the software that operates the integrated defensive avionics – a complex system of radar and missile warning sensors, signal-jamming devices, and other defensive equipment – on two main Air Force aircraft, the C-130 Hercules transport and the MH-53 helicopter. GTRI is also involved with integrated defense avionics development for the Air National Guard's F-16 and A-10 aircraft.

"Our work first involves situational awareness, to make sure that aircraft avoid the areas where they could be engaged by missiles or anti-aircraft guns, and the second part involves assisting the crew in employing countermeasures to protect itself," says Joe Brooks, a research engineer with GTRI's Electronic Systems Laboratory (ELSYS) and a lead researcher on the MH-53 program.

Working mostly with the Warner Robins Air Logistics Center, GTRI focuses on defensive system integration – connecting the sensors that detect enemy threats to the cockpit displays that inform crews about those threats. GTRI's software integrates reports from multiple sensors to reduce crew workload and reduce ambiguous reports, and provides automated threat response strategies that can be programmed to operate with or without crew interaction.

Such software gives the aircrew early warnings about potential threats at long distance. If the crew cannot simply fly around enemy threats, GTRI's software either alerts them to take manual countermeasures, or it responds automatically to avoid or neutralize incoming missiles or ground fire.

Link to full article: http://gtresearchnews.gatech.edu/newsrelease/amp.htm

Injured on the Job?
GTRI's Workers Compensation Procedure

If it's an Emergency:

Immediately notify the Georgia Tech Police at (404) 894-2500. The Police Department will respond and arrange for emergency medical transportation, if needed. If minor medical assistance is required, the injured employee may be transported by non-emergency personnel (or may even transport himself or herself) to a health care provider approved by the State of Georgia Department of Administrative Services (DOAS). Lists of approved health care providers are posted in each building. They may also be obtained by accessing the Benefits web page at www.ohr.gatech.edu or by calling the Employee Benefits Office at (404) 894-3925. Use of a health care provider other than one approved by DOAS may result in a refusal by DOAS to pay for the health care services.

Workers' Compensation benefits are restricted to employees. Individuals performing work for Georgia Tech as consultants, contractors, subcontractors, temporary agency personnel, etc. are not recognized as Georgia Tech employees and are not covered under these provisions.

TeleClaim Reporting Instructions

Supervisors should call TeleClaim (toll free 1-877-656-7475, 24 hours a day, 7 days a week) to report injuries within 24 hours of an accident. Reporting should be delayed only long enough for the supervisor to take the employee to the doctor. Claims may only be reported by a supervisor. Employees can not call in their own claims.

The supervisor will be asked to provide the following information:

- Name and Address of Injured Employee
- Name and Address of Employing Agency
- Social Security Number of Injured Employee
- Age and Sex of Injured Employee
- Date & Time of Accident
- Description of Accident (how, where, why)
- Type of Injury (cut, scrape, burn, etc.)
- Exact Part of Body Injured
- Place of Occurrence
- Full Time / Part Time Employee
- Hourly / Weekly / Monthly Wage
- Date of Hire
- Witnesses (Name and Telephone Number)
- Name and Address of Physician / Hospital
- Has Injured Employee Returned to Work?
- Anticipated length of disability
- Basic Job Duties
- Description of Physical Requirements of Job
- Supervisor's Name and Telephone Number

Once a claim has been reported through TeleClaim, any corrections to the above information should be made by calling your dedicated DOAS Workers' Compensation Specialist. A copy of the completed first report of injury will be faxed to both the number designated by your agency and your DOAS Workers' Compensation Specialist within 24 hours of the report. Only injuries requiring medical care or lost time from work should be reported to TeleClaim. Injuries requiring only first aid or requiring no medical care should be recorded within the agency as an incident only ("incident only" forms can be obtained from DOAS or from the OHR webpage):

Department of Administrative Services
P.O. Box 38198
Atlanta, Georgia 30334
(404) 656-6245

Awards & Outstanding Achievement

RSD has renamed the RSD Security Professional of the Year Award in honor of **Phyllis Christopher (ELSYS and formerly of RSD),** a recent GTRI retiree. The award will now be the Phyllis Christopher Research Security Professional on the Year.

John Daher (SEAL) and Jan W. Gooch (Chemical and Biomolecular Engineering) have recently signed a publishing agreement with Springer Publishing Company for the book they co-wrote entitled *Electromagnetic Shielding and Corrosion Preventing.* The book should be available in January 2007.

Bill Fishbein (SEAL) has been selected as the 2006 IEEE/AESS Pioneer Award Winner. The Pioneer award is given by the IEEE once a year to one individual (or team) recognizing "pioneering contributions to aerospace and electronic systems that have occurred at least 20 years prior to the year of the award and are still in use today." Bill's award recognizes his contributions to the development of the Army's Firefinder Radars, more that 350 of which are in operation today by more that 17 different nations. The award will be presented at the AUTOTESTCON conference in Anaheim on September 21, 2006.

ATAS held their annual awards luncheon on June 22, 2006 and presented the following awards:

Outstanding Program Development Award:

Allan Williams – For his extraordinary contributions to the development of new programs in support of a 'One-GTRI' approach to technical excellence, for creating an improved business development paradigm at GTRI emphasizing inter-laboratory teams, idea generation, and systems thinking in the context of future threats, and for developing the new GTRI collaborative visualization environment in support of the GTRI systems strategic thrust.

Outstanding Technical & Professional Competence Award:

Homer Cochran - In recognition of continuous excellence in systems engineering, threat analysis, and the pursuit of future research

Mike Heiges - In recognition of his initiative, technical performance and leadership demonstrated in support of intelligent/autonomous system engineering

Kevin Massey - In recognition of his outstanding technical contributions in sponsored projects in smart munitions, facilities support, and for mentoring students

Outstanding Support Award:

Rodger Davis - In recognition of technical achievements, dedication to project productivity and performance, and attention to customer satisfaction demonstrated in service of lab computer/network systems and support of test and evaluation systems development

Outstanding Undergraduate Student Achievement Award:

Adam Churney - In recognition of his outstanding technical contributions in support of sponsored programs in aeroacoustics including wind turbine noise, fan noise and jet noise

Outstanding Graduate Student Achievement Award:

Donald Nance - In recognition of his outstanding technical contributions in support of sponsored programs in engine noise diagnostics

GTRI Joins the RSS and Podcasting Revolution!

For years people have used the Internet to find news and information. However, new technology has made it possible for web-savvy "surfers" to subscribe to the news they want so it will be sent directly to them, eliminating the need to search.

GTRI's external website proudly features the new Really Simple Syndication (RSS) (www.gtri.gatech.edu). Log on today to listen to NPR-style GTRI audio productions known as Podcasts. Visitors are encouraged to subscribe to both the new GTRI podcast feed and research headline news feed. Subscribers receive up-to-the minute news and information from GTRI. Every time a new podcast or article is posted to the site, it is sent out automatically to the desktop of each subscriber.

To learn more on how to subscribe to GTRI's podcast and news feeds, visit our information page at http://www.gtri.gatech.edu/news/rss_feed_info.html

GTRI RSS/PODCAST FEED ON iTUNES

To subscribe to the GTRI PodCast:

- From lower left corner of the GTRI website homepage http://www.gtri.gatech.edu/ -- right click on bright orange button next to GTRI Podcast that says Podcast
- Depending on your web browser, choose either "Copy Link Location" or "Copy Shortcut".
- In iTunes drop-down menu choose Advanced, then choose 'subscribe to podcast'. Paste or control+V the GTRI link into the box asking for a URL.

Sharing Tools And Technology: Relex Software

Did you know that GTRI's Electro-Optical Systems Laboratory has a site license for the Relex Reliability Prediction Engine? This software is THE premier system reliability prediction technology widely recognized and in use by industry and military today. It is on site in the Baker Building, with experienced users available to help you calculate lifetimes and assess other system design needs.

Relex Reliability Prediction puts a virtual equipment testing lab at the PI's fingertips. Relex can quickly run design trade studies or "what-if?" calculations and scenarios. Relex supports mission calculations, determining MTBF results based on the entire mission or a particular mission phase. Relex also supports reliability allocation calculations, optimally weighting mean time between failures (MTBF) portions across the system of interest allowing for rapid identification of "weak-link" in system design. Relex calculations can also account for dormant and active cycles. These unmatched capabilities take reliability prediction analyses to the next level by offering functionality beyond the basic prediction modeling techniques.

The user-friendly Relex interface turns complex system reliability calculations into a simple, intuitive process. Relex Reliability Prediction supports a wide array of electronic and mechanical components, software models, and user-defined components. It has an expandable database of over 300,000 parts and was recently used by GTRI-EOSL in the successful Advanced Container Security Device (ACSD) Program.

By incorporating all globally accepted reliability standards and statistical models, Relex Software offers the most comprehensive prediction package in the world. With Relex, the additional analysis capabilities available in one model can be applied to any model. For example, GTRI researchers and system developers can incorporate Bayesian or Process Grade analysis from the PRISM standard into a MIL-HDBK-217 analysis; or GTRI could apply Method analysis from the Telcordia standard into an HRD5 analysis. Only Relex offers this kind of flexibility and increased analysis potential.

The common database that all Relex modules are built around allows the modules to dynamically share data and update results as values are modified. This means that the failure rate of components calculated by Relex Reliability Prediction can be used in Relex Failure Mode Effects Analysis (FMEA) to automatically compute mode failure rates. Or, GTRI-EOSL can use these calculated failure rates for components in a Relex Reliability Block Diagram (RBD) to account for the predicted failure rate in reliability and availability results. This unique level of integration is one of the most widely praised Relex innovations.

Relex Reliability Prediction provides accurate, consistent, and efficient reliability prediction analyses. The comprehensive analysis options, customization potential, and seamless integration with the entire Relex product line gives GTRI-EOSL the power to improve system design, streamline system architecture, and produce more reliable designs with quantifiable confidence. (For more info contact jud.ready@gtri.gatech.edu; 404-407-6036)

SSD UPDATE: MAJOR CONSTRUCTION

By Rusty Embry, SSD

Major construction and renovation requests are handled as "special projects" in the Support Services Department. When requests are received from a lab or department, a Project Manager is assigned and pertinent information is obtained. A scope of work is compiled and is sent for design and/or engineering. After all information is compiled a package is either prepared for bidding to outside contractors, assigned to a contractor on state contract or done by in-house GTRI personnel. Meetings are held with our customers, contractors and project managers then a schedule is prepared and work progresses until finished.

In addition to requests from the labs and departments, SSD has an ongoing infrastructure & modernization list that is addressed every year dependant upon funding.

There are multiple processes and actions involved internally with construction & renovation. One of the most important is GTRI policy 1.13, the Space Modification Request form. It is required on every project that SSD handles. This form is used to determine the scope, size and urgency of a request.

Another one of the important factors is obtaining funding for the project. Having funds available in advance is always a timesaver.

Requests for major construction & renovations should be sent to Brenda Hill, SSD/MC/0802 along with the Space Modification Request form.

Scams, Spams, Cons, and Deceptions

By Steve Woodall, Director, RSD

We are constantly bombarded by unwanted e-mails, phone calls, warnings, news articles, and other forms of communication that are geared to making us afraid or taking our money.

Just the other day I got an e-mail that was beautifully constructed, complete with a perfect bank symbol. The letter warned of a potential problem with my account and told me how to log on to check my account to see if everything was okay. I didn't get excited because I have never had an account with that bank, but my guess is that someone, somewhere, launched the website, entered account information, and later found his/her bank account a little lighter.

If your bank, or someone appearing to be from your bank, or another legitimate business, sends you an unexpected e-mail that ultimately requires you to enter personal information on-line, pick up the phone and call your bank or visit in person to determine if the e-mail is legitimate. I think you will find that almost all always it is a scam. I got a new one as I prepared this article. It said, among other things: Please confirm your identity here: Restore My Online Banking Account and complete the "Steps to Remove Limitations." I decided to pass on that invitation and you should too.

GTRI has a spam filter on its e-mail system, but the spammers are creative and some messages still get through. They use deliberately misspelled words or unrelated titles to get through the filters. Once the e-mail clears that hurdle, you are looking at a sleazy advertisement for a medical product or an offer that is too good to be true. As a matter of fact, if it seems too good to be true, it probably is.

Another popular scam is known as the "bag of money" con game. The electronic version originates in Nigeria, or other overseas area, and targets an e-mail or postal address. The con-artist has money "in a bag" and for a small investment on your part, will share his or her wealth with you. In the live version, the "mark" sees the bag with the money in it and is usually talked into withdrawing a like amount from the bank as a show of good faith. Sadly, the mark withdraws the money, hands it over, and the perpetrator disappears. Even though it's been around for years, it still works. Privacy laws are so strict that banks are powerless even when they suspect what is occurring.

The electronic game usually involves oil money or some other riches in the millions that someone is trying to keep away from an evil and illegitimate government. For a mere $X000.00, the con-artist will share the wealth with you. Avoid responding to these requests either electronically or by phone. There are actually teams that do this for a living. They are very convincing once you indicate any interest. The amount of money is significant enough that federal authorities have become involved in investigating these con-artists.

There are no perfect answers, but be suspicious of anyone who wants information about you or your personal bank accounts. If someone asks for a little money so they can share a large amount with you – don't be fooled.

THE FUNNY BONE: Why Engineers Don't Write Recipe Books

Chocolate Chip Cookies:

Ingredients:

1. 532 . 35 cm3 gluten
2. 4 . 9 cm3 NaHCO3
3. 4 . 9 cm3 refined halite
4. 236 . 6 cm3 partially hydrogenated tallow triglyceride
5. 177 . 45 cm3 crystalline C12H22O11
6. 177 . 45 cm3 unrefined C12H22O11
7. 4 . 9 cm3 methyl ether of protocatechuic aldehyde
8. Two calcium carbonate-encapsulated avian albumen-coated protein
9. 473 . 2 cm3 theobroma cacao
10. 236 . 6 cm3 de-encapsulated legume meats (sieve size #10)

To a 2-L jacketed round reactor vessel (reactor #1) with an overall heat transfer coefficient of about 100 Btu/F-ft2-hr, add ingredients one, two and three with constant agitation. In a second 2-L reactor vessel with a radial flow impeller operating at 100 rpm, add ingredients four, five, six, and seven until the mixture is homogenous. To reactor #2, add ingredient eight, followed by three equal volumes of the homogenous mixture in reactor #1. Additionally, add ingredient nine and ten slowly, with constant agitation. Care must be taken at this point in the reaction to control any temperature rise that may be the result of an exothermic reaction.

Using a screw extrude attached to a #4 nodulizer, place the mixture piece-meal on a 316SS sheet (300 x 600 mm). Heat in a 460K oven for a period of time that is in agreement with Frank & Johnston's first order rate expression (see JACOS, 21, 55), or until golden brown. Once the reaction is complete, place the sheet on a 25C heat-transfer table, allowing the product to come to equilibrium.

Continued From Page 1

solutions through customer-focused R&D. This initiative directly supports Georgia Tech's vision to define the technological university of the 21st Century."

Georgia Tech Ireland and its research partners will focus on several strategic research strands to provide international leadership in these emerging fields.

The institute's digital media research will include development of a national test bed for Internet protocol television (IPTV), a fully interactive digital television research and development platform offered via fixed and wireless broadband connections. By bringing together developers and users, the institute will explore the potential applications of this emerging technology.

The research with RFID will center on authentication and identification technologies including RF, accoustics and optics for the commercial sector. Using a systems engineering approach, the work will provide novel technologies to address complex challenges in global asset tracking, ePedigree and manufacturing.

The institute's biotechnology research will focus primarily on medical devices for preventive and predictive medicine and manufacturing of medical devices. Here the focus will be on the convergence of pharma, biomedical devices and ICT.

The institute's energy and environmental research focus will be on enabling technologies and systems models for sustainable energy alternatives. The range of research will span stationary and mobile applications.

GT Ireland's Athlone location leaves it well situated for collaborative research with a broad range of companies and universities throughout Ireland. Athlone is between Dublin on the east coast and Galway on the west coast. Cork, home of the renowned Tyndall Institute, is on the southern coast. Elan Pharmaceutical and Ericsson are both headquartered in Athlone, and other major corporations have plans to come to the region.

GTRI Deputy Director Dr. David Parekh, who has been working with IDA Ireland for the past two years to bring this initiative to fruition, will have primary responsibility for developing GT Ireland strategy, establishing corporate alliances and selecting the right talent to ensure this endeavor is successful. He commended IDA for its commitment to innovation and effectiveness in supporting initiatives through a world-class staff of professionals in Ireland and the U.S. In describing this partnership with the country of Ireland, he remarked, "Ireland has the resources of a nation and the agility of a start-up."

Georgia Tech Ireland

WebWISE:

The WebWISE Vacation/Sick Leave Lookup application will be retired for FY07. Employees may view their real time balances via the eTime application.

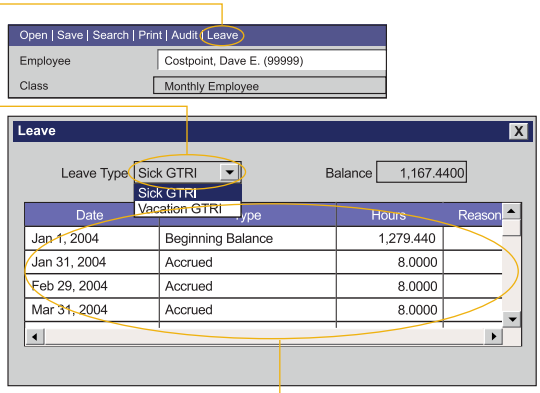
To access the eTime Leave, simply select the "Leave Lookup" option from the Timesheet Menu (directly above timesheet). The application reduces the employees available leave balance immediately upon timesheet save when vacation or sick leave is entered. Accruals post on the 3 or 4th workday following month-end for monthly-paid employees and by the subsequent Tuesday following biweekly payrolls; so the eTime option will be more up to date than the current WebWISE application.

Contact tcadmin@gtri.gatech.edu if you have any problems.

Leave Balances can be viewed by Clicking on Leave

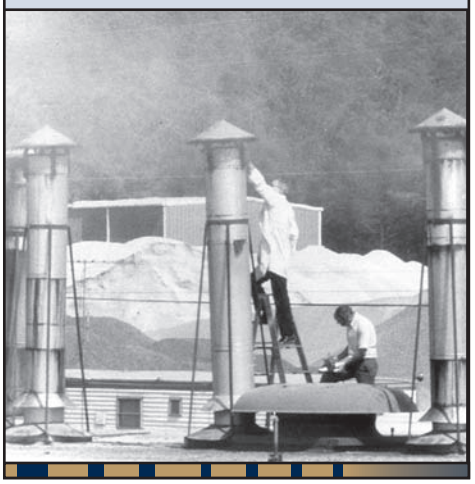
Select leave type from drop down menu

The Balance will then be displayed. This balance includes accruals through the previous period's activity and leave taken through the current time sheet period.



> Mystery History

Help us to identify a photo from the GTRI archives. Do you know the person or project depicted? . . .Or, if you want to have some fun, make up a caption! Send to GTRInsider@gtri.gatech.edu To read feedback on prior Mystery History pictures, log in to WebWise and visit: https://webwise.gtri.gatech.edu/corporate/comm/gtrinsider/index.html



One of GTRI's goals is to hire the best, equip the best, and reward the best employees.

The following people have recently joined or retired from the GTRI team!

> Welcome to the GTRI Family!

START DATE	DEPARTMENT/LAB	NAME	TITLE	START DATE	DEPARTMENT/LAB	NAME	TITLE
3/9/06	GTRI-SS	NAKENYA M. CORKER	CUSTODIAN I	5/1/06	RSO	JAMES ELLIS	INDUSTRIAL SECURITY COORDINATOR I
3/13/06	GTRI-BSSVC	ROLAND TISDALE	PROJECT DIRECTOR II	5/10/06	SS	SAMUEL C. PETERS	PROPERTY CONTROL OFFICER
3/16/06	GTRI-ATAS	CHRISTINE I. SHAPIRO	ADMIN ASSISTANT I	5/11/06	SS	SHIRAH D. GAYDON	MAINTENANCE WORKER I
3/23/06	GTRI-EOSL	SHEMERRA F. SEARCY	SECRETARY SENIOR ADMIN	5/15/06	RP	PALLA R. SMITH	PROJECT COORDINATOR I
4/1/06	ISD	WILLIAM S. MILLER	SYSTEMS SUPPORT SPECIALIST I	5/17/06	STL	ANDREW W. HOWARD	RESEARCH SCIENTIST I
4/3/06	STL	ROBERT C. DOWNS	PRINCIPAL RESEARCH SCIENTIST	6/9/06	BSSVC	ALICE H. FELLABAUM	ACCOUNTING SYSTEMS & PROC SPEC
4/5/06	ELSYS	CLAYTON J. HUTTO	RESEARCH SCIENTIST I	6/9/06	STL	PATRICK D. NEELY	RESEARCH ENGINEER I
4/10/06	ISD	WAYNE D. AUSTIN	SYSTEMS SUPPORT SPECIALIST III	6/19/06	SEAL	STEPHEN E. CONOVER	RESEARCH ENGINEER I
5/1/06	SS	TINA HIGGINS	ADMIN ASSISTANT I	6/29/06	ISD	REGINALD Q. CARTER	COMPUTER SERVICES SPEC III
5/1/06	MAPS	MARCHELLE TOWNS	PROJECT SUPPORT ANALYST II				
5/1/06	RSO	HAROLD E. MARSHALL	INDUSTRIAL SECURITY COORDINATOR I				

> Goodbye From the GTRI Family!

RETIRE DATE	DEPARTMENT/LAB	NAME	TITLE	RETIRE DATE	DEPARTMENT/LAB	NAME	TITLE
6/1/06	ATAS	JAMES D. HIGGINS	PRINCIPAL RESEARCH ENGINEER				

We Want to Hear from You!

The GTRI Communications Office welcomes and looks forward to your feedback on our new employee newsletter – the *GTRInsider*. Based on your input, we'll make sure that we focus on topics and stories that matter to you. If you have news, ideas, or suggestions to share concerning stories and features you would like to see in future issues, please let us know by completing and returning this form. You are also encouraged to nominate GTRI employees we can feature in the Up Close and Personal With… section of future issues.

You can fax completed forms to 404-407-9759 or send it via campus mail to Kathryn Knox in CRB 276A/mail code 0801. You can also e-mail your comments to GTRInsider@gtri.gatech.edu

Please print or type:

Name: _____

Lab/Department: _____

Phone (day): _____ Cell (optional): _____

E-mail: _____

Comments/Suggestions/Ideas: _____

_____

_____

My suggestion for a future employee profile in the "Up Close and Personal With" section is:

Employee's Name: _____ Lab/Department: _____