

GTRI Insider

Summer 2007

Clean Room Classic: Vacuum Evaporator Purchased in 1957 Still Going Strong

A 1957 classic sits in the Georgia Tech Research Institute (GTRI) clean room. It's not a Chevy, but a Veeco vacuum evaporator more than six feet tall and five feet wide.

The evaporator, still in use today, deposits thin-films necessary for microfabrication processes. Applications include creating the reflective or anti-reflective coatings on optics and building up layers of insulators, semiconductors and conductors to form integrated electronic circuits.

"It's a very rugged machine and it's gotten better with age," said Mike Harris, a GTRI principal research engineer who first used the Model 775 evaporator in 1972 as a student at the Georgia Institute of Technology.

The system operates by evaporating a source material, such as a metal, in a high vacuum, allowing vapor particles to travel directly to a target object, such as a semiconductor, where they condense back to a solid state and form a thin film of the source material.

Harris attributes the machine's longevity to its design and documentation and to the skills of GTRI technicians and engineers.

"The operator and maintenance manuals are excellent, with exploded views of the various piece parts, making it very easy for our technicians and engineers to repair it when we have problems," explained Harris.

In addition to repairing the system, GTRI engineers have upgraded and modified the evaporator several times since it was purchased.

First, they changed the high vacuum pump from a diffusion pump to a more modern cryogenic pump in 2002.

The diffusion pump generates a high speed jet of vapor by boiling fluid



and directing the vapor in the pump throat down into the bottom of the pump and out the exhaust. The newer cryogenic pump traps gases and vapors by condensing them on a cold surface.

To increase the uniformity of results, GTRI researchers added a planetary substrate fixture that rotates inside the evaporation chamber.

In addition, the original system was designed with a tungsten filament that was heated to a high enough temperature so that the source material placed in a crucible on the filament evaporated. GTRI engineers changed this to an electron beam evaporator that fires a high-energy beam from an electron gun to boil a small spot of material, allowing lower vapor pressure materials to be deposited.

Since the 1957 system still runs and remains optimal for numerous applications, Harris sees no reason to buy a new one.

"New systems like this probably cost between \$700,000 and \$1,000,000," he explained. "And the new systems are designed primarily for throughput and that's not necessarily best for a research environment."

This campus resource, managed and operated by GTRI's Electro-Optical Systems Laboratory, supports research in GTRI as well as Electrical and Computer Engineering, Mechanical Engineering, and Materials Science and Engineering.

"We've taken care of this piece of equipment and it's served us well," noted Harris, who believes the evaporator will last another 10-20 years with proper maintenance. ●

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PROJECT DIRECTOR CERTIFICATE PROGRAM GRADS



Photo: (left to right) Sean Ahonen, Vivian Viverito, Shane Owens, Jennifer Geist, Shris Spivey, Chris Henderson, Robert Swistak, Scott Silence, Ayana Reddick. Not pictured: Rick Levin, he was off running a little marathon in Boston (see below).

Congratulations to GTRI's most recent graduates of the Project Director Certificate Program. Graduates were recognized at a luncheon hosted by GTRI's DD office on April 18. The GTRI two-year certificate program focuses on broadening the knowledge and skills that are essential to successfully manage and lead research projects at GTRI. The Project Director Certificate Program is designed for the Research Engineer and Research Scientist I and II with 3 to 10 years experience. It includes seven required courses and two electives. For more information, contact Gaynell Scott at 404-407-7588.

GTRI's BOSTON MARATHONER

GTRI's Rick Levin finished the Boston Marathon in 3:48:11 with a pace of 8:43. Way to go Rick!



The *GTRI Insider* 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..

Refining the GTRI Vision

At the end of each fiscal year I always take time to look back and reflect on what GTRI has accomplished during that time, both technically and financially. It's no secret that there have been many impressive technical achievements this year and I want to personally thank you for your hard work. What you may not realize is that GTRI had a banner year financially as well! Our research awards at fiscal year end were \$131.5 million, an 17% increase from last year.

While awards are one indicator of your hard work and widespread impact, I routinely hear very positive comments from our stakeholders in government and industry about GTRI's outstanding work and terrific people. Our sponsors trust us and know they can count on GTRI to solve some of their toughest problems with efficiency and creativity.

As I look into GTRI's future, I'm trying to predict what GTRI will look like five years from now. Where is our organization going and what will GTRI look like when we get there? I've challenged our Leadership Council to answer the questions and have also started getting feedback from our researchers through a series of brown bag lunch sessions.

This is a statement of what we will look like in the future and is the message I plan to write to you in 2012. We are not there yet, but we are moving in this direction.

Over the past five years, we have experienced a renaissance punctuated by growth in revenue, number of research faculty, impact, and recognition. Our role within Georgia Tech is celebrated by the Institute, the alumni, and the state. Since 2007, our annual revenues have grown 40% and now exceed \$200M with reserves in excess of \$30M. We have started construction of a new building (CRB-II), completed Phase II of the Food Processing Technology Building, and implemented long term solutions to leased space. Our overhead rate has dropped below a multiplier of 2.80. With a 30% increase in technical staff, our 750+ research faculty are internationally recognized. We are known as a "go to" organization for "big" systems (system complexity, contract size, initial analysis). GTRI is now recognized as a key innovator and solution provider in important national security areas and in a number of commercial markets such as food processing, health care, energy, environment, and transportation. We are recognized as having the unique ability to solve some of the world's toughest problems by taking ideas from concept to testing to implementation. Our sponsors view and use GTRI as the portal to access the vast array of intellectual capital at Georgia Tech. We have received the Cogswell Security Award [1] (note this award is granted only after two consecutive superior ratings). Others routinely benchmark against all of our support and business practice areas.

What do you think about this statement? How would you suggest it be improved? How do we get from where we are to where we want to be? I would love your feedback on this vision as I continue to refine it in preparation for GTRI's annual fall strategic planning offsite meeting. Please send me your comments directly: cross@gatech.edu

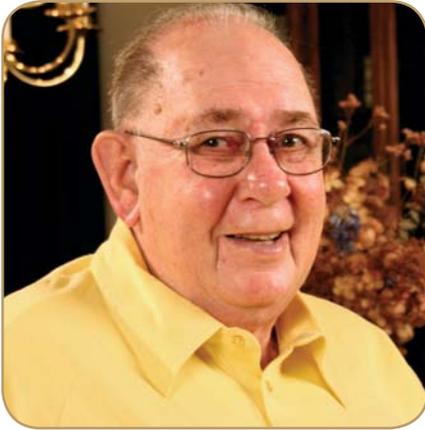
Again, I thank you for all that you do to support our state, nation, and the world.

[1] For More information about the Cogswell Security Award, see http://www.dss.mil/about_dss/press_room/07cogswell.html

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



SAYING GOODBYE: DON GRACE



In the spectrum of effective-leadership qualities, one of the most important, but least heralded, is a sense of humor.

“A lot of people don’t realize how funny he was,” said Janice Rogers. “He had a droll sense of humor, and he was absolutely hilarious when he wanted to be.”

She was speaking of Donald J. Grace, 81, former director of the Georgia Tech Research Institute (GTRI) and vice president of Georgia Tech, who passed away on March 15 after a brief illness. Rogers was his assistant from 1986 until his retirement seven years later.

“He was just about the greatest boss you could ask for,” she continued. “One thing about Don, he always thought of other people first. He surrounded himself with capable people and tried to make sure they got what they needed to do their jobs.”

Running GTRI was a demanding task that required Grace’s attention “almost 24/7,” she added. “Until you’ve worked in the director’s office, you don’t realize how much external work there is — meeting with sponsors, potential sponsors, students and donors to Georgia Tech. It’s very different from doing research only.”

Ray Moore also appreciated Grace’s sense of humor. “He laughed easily, and had a sophisticated sense of humor which suited him well,” recalled Moore, who served in Georgia Tech’s Office of Research Communications during Grace’s tenure. Occasionally he and his wife and the Graces would get together to play cards. The experience underscored another of Grace’s attributes. “He had a very keen intelligence. Don and Joan were both sharp, very quick, believe me,” said Moore, sounding like someone who

had lost a number of card games.

“I thought he had a good touch with human relations as well,” added Moore, reflecting on some of the difficult issues Grace handled as GTRI director. “He had a humanity about him that was reflected in his dealings with his people. He handled problems fairly and without recrimination.”

Charles Brown first became acquainted with Grace from a sponsor’s perspective, when Brown served as a technical monitor for the U.S. Air Force, and then later as an employee of a GTRI lab.

“Don Grace would always listen, and I appreciated that,” Brown said. Even if he didn’t get the answer he wanted, Brown continued, “I felt that he was receptive. He probably knew things I didn’t — budget constraints or some other reason — but he always gave due consideration to an issue, and then he’d take action and do the right thing.”

When Grace came to GTRI in 1976, it was still called the Engineering Experiment Station. Earlier, he had served as associate dean of engineering at Stanford under Joseph M. Pettit, who became Georgia Tech’s president in 1972.

Grace’s arrival at Tech was greeted with a fair amount of anticipation, according to Hugh Denny, who was working as a self-described mid-level research manager at the time.

“Before, there was a feeling that we were out in

the woodpile someplace and nobody paid much attention to us,” Denny recalled. “The sense we had with Don was that now we’ve got somebody who at least has the ear of the president’s office.”

Among the changes championed by Grace was changing the research component’s name to GTRI in 1984.

“The moniker Engineering Experiment Station was reflective of an earlier time,” Denny said. To be more competitive the name change to GTRI signaled to prospective customers that we were part of the “big team”.

GTRI’s spectacular growth is the most prominent legacy of Grace’s 16-year stewardship. When he became director, its strength was in defense electronics and economic development. GTRI’s research capabilities expanded to include such areas as environmental science and technology, manufacturing, materials science, and energy development.

To Grace’s family, friends and co-workers, his life could be summarized in a quotation Grace chose himself. Speaking at winter commencement in 1985, Grace conveyed an observation first written by George Washington Carver:

“How far you go in life depends on your being tender with the young, compassionate with the aged, sympathetic with the striving, and tolerant of the weak and the strong. Because someday in life, you will have been all of these.”

Don Grace traveled far indeed. ●



GT Sting Racing Team Selected as Finalist

Georgia Tech's Sting Racing team, competing in the Defense Advanced Research Projects Agency's (DARPA) Urban Challenge, has passed its site visit and is one of 36 teams judged technologically capable of competing in the final round. The team's autonomous vehicle, Sting 1, successfully completed all four tests during its capabilities evaluation, taking it into the next stage in this two-year competition among leading research and technology universities in the United States.

DARPA assessed the ability of the autonomous vehicle to perform tasks and operate safely. Sting was evaluated on its ability to navigate a test course that included a four-way intersection, and moving traffic. This evaluation covers a subset of the challenges that the robotic vehicles will face on the final Urban Challenge course, including merging into moving traffic, navigating traffic circles, negotiating busy intersections and avoiding obstacles.

Sting Racing, a joint collaboration between the Georgia Tech Research Institute, Georgia Tech's College of Computing, College of Engineering and SAIC, selected a Porsche Cayenne, designated Sting 1, as the base vehicle for its entry in the Urban Design Challenge. For nearly a year the members of the Sting Racing team have been working to program the robot to drive autonomously by staying on course and recognizing obstacles in its way, such as other cars.

DARPA uses the site visit evaluation to select the competition's semi-finalists - the top 36 teams that will participate in the National Qualification Event (NQE), an exercise to demonstrate the safety of the vehicles on October 21-31 to take place at the former George Air Force Base in Victorville, California.



The Urban Challenge is the third in a series of DARPA-sponsored competitions to foster the development of robotic ground vehicle technology without a human operator, designed for use on the battlefield. The Urban Challenge, set for November 3, 2007, will feature autonomous ground vehicles executing simulated military supply missions safely and effectively in a mock urban area. Safe operation in traffic is essential to U.S. military plans to use autonomous ground vehicles to conduct important missions and keep American personnel out of harm's way. DARPA will award \$2 million, \$1 million and \$500,000 awards to the top three finishers that complete the course within the six-hour time limit. ●

For more information, visit www.sting-racing.org.

***All New* Up Close and Personal With... Bobby**

NAME: Bobby Anthony Ramey	WORKING FOR: SSD/Delivery Services	WORK LOCATION: 430 North Bldg.	GTRI EMPLOYEE SINCE: 1980
<ul style="list-style-type: none"> » IF YOU WERE A SUPERHERO, WHICH ONE ARE YOU? Bill Elliot (superhero masquerading as a NASCAR driver) » WHAT WAS THE LAST TWO MUSIC CDs YOU PURCHASED? Brooks & Dunn and Tina Turner. » WHAT SITCOM THEME SONG BEST DESCRIBES YOU? Andy Griffith Show. » IF I WERE ANYWHERE ELSE IN THE WORLD, DOING WHATEVER I WANTED... I WOULD BE WHERE DOING WHAT? On the NASCAR circuit, driving. » HAS THERE EVER BEEN A MOVIE, BOOK, OR T.V. SHOW THAT CHANGED YOUR LIFE? Forrest Gump. » THE MOMENT YOU KNEW YOU WERE A GROWN-UP: When I paid for my first car. » IF YOU HAD TO EAT ONE FOOD FOR A WEEK, WHAT WOULD IT BE? Pork Roast. (excluding a debate between pimento cheese and liverwurst.) » ALL TIME FAVORITE TOP THREE MOVIES? Walking Tall (the original), Die Hard, Days of Thunder. 	<ul style="list-style-type: none"> » IF YOU COULD HAVE LUNCH WITH ANYONE (DEAD, LIVING, FICTIONAL) WHO WOULD IT BE AND WHY? Dallas McKay (a DeeJay for Eagle radio 106.1). » ARE YOU A ROLLER-COASTER OR MERRY-GO-ROUND PERSON? Roller coaster. » SOMETHING YOU PROBABLY DIDN'T KNOW ABOUT ME: That I'm a big flirt. » MY SILLIEST PET PEEVE OR PHOBIA: A stickler for being on time (and expecting others to be too). » BEST THING YOU LIKE ABOUT YOURSELF: Being on time! » THREE WORDS THAT DESCRIBE ME BEST: Dependable, flirt, likable. » RECENT BOOK READ: The Bible. » WHAT I LIKE MOST ABOUT MY JOB. The people. » IF I WON THE LOTTERY, I WOULD: Go to every NASCAR race and sit in the VIP section! 		

PHILANTHROPY AND GTRI

By Betsy Plattenburg

What is philanthropy? According to the American Heritage dictionary:

phi•lan•thro•py (fi-lăn'thro-pē)
n., pl. -pies.

1. The effort or inclination to increase the well-being of humankind, as by charitable aid or donations.
2. Love of humankind in general.
3. Something, such as an activity or institution, intended to promote human welfare.

[Late Latin philanthrōpīa, from Greek, from philanthrōpos, humane, benevolent: phil-, philo-, philo- + anthrōpos, man, mankind.]

At Georgia Tech – we most often associate philanthropy with making a gift to the school or college we received a degree from or giving a gift to support athletics. GTRI has not been an active part of the University fundraising efforts, until recently. While we have raised money for specific causes, like the Shackelford Fellows program and to fund small research projects, donated money was graciously received but not actively sought. As GTRI looks at a strategy of business growth that pursues new markets, recruiting and retaining top talent and providing internal venture capital to pursue promising ideas will be priorities. Fund raising can provide the liquidity and flexibility needed to grow and adapt for the 21st century.

For the first time, GTRI has a dedicated staff proactively focusing on philanthropy. Please keep an eye out for this column in each edition of the Insider as we share information about gift opportunities, how to make a gift, who might want to make a gift and why and ways we plan to connect with potential donors to tell the GTRI story. We have a rich history of innovative research, a strong cadre of students, amazing researchers, and a very bright future. If we are going to think outside the box in terms of the research we pursue, we have to think creatively on how we can finance these pursuits.

For any questions about philanthropy and GTRI, please call, send an email or stop by and visit, room 210 Centennial Research Building. ●

Betsy Plattenburg

Director of Development & Corporate Relations

(404) 407-7889

www.gtri.gatech.edu

TRANSPORTATION GROUP TAPS GTRI RESEARCHER AS CHAIRPERSON

The Center for Transportation and the Environment (CTE), an Atlanta-based nonprofit that facilitates the development and demonstration of advanced transportation technologies, today announced that Dr. Thomas Fuller will serve as the organization's chairperson through Spring 2009.

He is the Director of the Georgia Tech Research Institute's Center for Innovative Battery and Fuel Cell Technologies, where his research interests focus on electrochemical systems for energy conversion and storage. Dr. Fuller is also a professor of Chemical Engineering at Georgia Tech, has served on CTE's Board of Directors since 2004. ●

Visit <http://www.cte.tv> for further information.

FOOD PROCESSING TECHNOLOGY DIVISION RECEIVES AWARD FOR PUBLICATION EXCELLENCE

The Food Processing Technology Division's Agricultural Technology Research Program received a 2007 APEX Award of Excellence in the Newsletters-Print category for its PoultryTech Spring 2006 Automation issue. Sponsored by Communication Concepts, Inc., the APEX Awards for Publication Excellence is an annual international competition that recognizes excellence in publications work by professional communicators in categories ranging from newsletters and magazines to annual reports, brochures, and web sites. APEX awards are based on excellence in graphic design, editorial content, and the ability to achieve overall communications excellence. Congratulations to Angela Colar, Editor-in-Chief; Steven Thomas, Graphic Designer/Photographer; Lucy Johnson, Proofreader; and Craig Wyvill, Editorial Advisor. ●



GTRI AND THE MISSION TO MARS

GTRI Director Steve Cross (pictured far right) serves on the JPL Senior Review Board for the Mars Science Laboratory Mission. The 2009 Mars Science Laboratory, the mammoth grandchild of the 1997 Sojourner rover, is less than one year from the assembly, test and launch operations phase. With its immense increase in size comes advanced abilities in power, technology and science data collection. Bobby Braun, a professor in Georgia Tech's school of Aerospace Engineering, is also on the team (pictured 2nd from the left). The Mars Rover for this mission, nicknamed Scarecrow is shown in the picture. ●



GTRI Research Notes

Special thanks to the Georgia Tech Research News and Publications Office for the following stories.

Research Center Promotes Accessibility to Wireless Technologies for People with Disabilities

THE WIRELESS WORLD is gradually opening its doors to people with disabilities because of new research, policy and consumer demand.

Significant contributions to the research and policy components of that equation come from work at the Wireless Rehabilitation Engineering Research Center (RERC) co-directed by the Georgia Institute of Technology and Shepherd Center, an Atlanta-based rehabilitation hospital.

Later this year, a wireless captioning system developed at the Georgia Tech Research Institute (GTRI) and licensed by SightLine Media will debut in movie theaters across the nation for beta testing. It will offer new, unobtrusive technology to allow people who are deaf or hard of hearing to enjoy Hollywood's latest films.



Long-Term Emissions Monitoring Validates Vehicle Inspection Program

THE NUMBERS TELL THE STORY: 25 Georgia counties, about 420,000 vehicles assessed for emissions each year at more than 60 monitoring sites, data gathered for at least 100 days a year in the field. Fifteen years of systematic data collection along the roadside, now with a fourth generation of equipment.

It's all to see if the \$80 million to \$100 million a year Georgians pay for vehicle emissions inspections and repairs is well spent.

These numbers describe the scope and impact of a long-term research study on vehicle emissions and air quality in 21 metro Atlanta counties, plus four more in Macon and Augusta, Ga. The study, conducted by GT researchers, is meeting the monitoring needs of Georgia's state government and offering significant insights that help direct both research and policy.



GTRI helps Georgia companies improve workplace safety and lower costs.

IT'S NO SURPRISE that a construction site can be hazardous for workers, but how dangerous can a funeral home be?

Plenty according to GTRI workplace-safety experts. Embalmers are exposed to a number of pathogenic microorganisms and chemicals, Dan Ortiz explains. In fact, preliminary data from a GTRI occupational health study indicates that up to 20 percent of embalmers in Georgia funeral homes may be exposed to formaldehyde levels above regulatory limits.

Although workplace safety has come a long way since the Industrial Revolution, reducing occupational hazards remains a challenge for U.S. employers, especially for smaller companies with fewer resources. In response, GTRI's consultation program (www.oshainfo.gatech.edu) provides technical expertise and training to help Georgia companies create cleaner, safer environments for their workers.



Nano-Manhattan: 3D Solar Cells Boost Efficiency While Reducing Size, Weight and Complexity of Photovoltaic Arrays

UNIQUE THREE-DIMENSIONAL SOLAR CELLS that capture nearly all of the light that strikes them could boost the efficiency of photovoltaic (PV) systems while reducing their size, weight and mechanical complexity.

The new 3D solar cells capture photons from sunlight using an array of miniature "tower" structures that resemble high-rise buildings in a city street grid. The cells could find near-term applications for powering spacecraft, and by enabling efficiency improvements in photovoltaic coating materials, could also change the way solar cells are designed for a broad range of applications.

The 3D design was described in the March 2007 issue of the journal JOM, published by The Minerals, Metals and Materials Society. The research has been sponsored by the Air Force Office of Scientific Research, the Air Force Research Laboratory, NewCyte Inc., and Intellectual Property Partners, LLC. A global patent application has been filed for the technology.

The ability of the 3D cells to absorb virtually all of the light that strikes them could also enable improvements in the efficiency with which the cells convert the photons they absorb into electrical current.



For more information on these stories visit www.gtri.gatech.edu

Voice Over IP Up and Running on Campus

By Jeff Jenkins, Director ISD

We've reached the point in our VoIP rollout that deserves a note or two. Our campus buildings are finished and Cobb County is slated to begin in the coming months. All of the equipment is in place and as soon as the timing is right, we'll press forward. The best estimate right now is early June. We've met with each of the labs that have VoIP deployed and given documentation and overviews to the local Computer Support Representatives (CSRs) so we can keep the service as close to the end user as possible. Even with the local support structure in place, a few people have been asking "How do I use this and what features are available?". There are literally dozens of features that you could buy for the phone system, but primarily we were going for an increase in efficiency (cost and deployment) as well as integrating the needs that the Labs told us about when we met one on one with them. So what are the new features?

- Add/Move/Change is a snap. Before, GTA took between two and six weeks to move a phone line. Now, you simply pick the phone up and plug it into another network port. Adding a new phone is averaging well less than a day.
- Reduced costs. The basic phone line is \$11.50 per month without network maintenance thrown in. It's \$17.50 with network maintenance. In the past, the same basic phone service

(averaged for all of GTRI) was \$31.50 and the labs had to pay for the network maintenance on top of that.

- Voicemail is now integrated with email and is delivered directly to your Inbox as an audio file. It is also still available via the phone, but I'm amazed at how few use the old method now.
- Adhoc conferencing on each phone. Everyone has the ability to create an adhoc voice conference with up to 6 people.
- There is an optional web interface that you can use to configure some of the features on your phone. These include turning call forwarding on/off and abbreviated dialing.
- What is abbreviated dialing? It's speed dialing. You get over 90 presets on each phone.
- Advanced phone features include advanced caller id, park and hold, one button call forwarding, and transferring.
- There are four numbers that you can reserve and use for dial in conferencing. Each number can handle up to 10 callers on a single conference. There is no password protection with this, so use it wisely.

"Meeting Place" (I don't make up these names) is the next generation of "Meet Me"

conferences and has been running in pilot mode with EOSL for about 6 weeks. It has all the basic features of "Meet Me", a dial in tele-conference number, with a few add-ons. It DOES have a security password that can be set to ensure only your group can hear the conversation as well as other moderator features. It also has a web capability to allow sharing of desktops (sharing Powerpoint presentations, collaboration on documents, ...) We're creating Meeting Place instructions and we'll add it to the VoIP documentation that we've already provided to the CSRs. It'll all be finished before we move into production on June 1.

There are also a couple of non-supported local features available such as dialing from a client within Outlook. This is mostly a local client issue and isn't supported centrally, other than to allow you to turn it on. But, we continue to add on new features as time and money permits.

One more note:

SEAL/EOSL and the GTRI Administration have all helped fund the purchase of new video tele-conferencing (VTC) units for GTRI. The VoIP system has a local built in VTC capability that we may be able to interface with the new Tandberg units over time, but that's up in the air and good groundwork for another article. ●

Questions contact Jeff Jenkins
jeff.jenkins@gtri.gatech.edu

RESEARCH SECURITY UPDATE

Jim Ellington joins GTRI as Director of Research Security

Jim comes to us from the University of California, Lawrence Livermore National Laboratory where as the Associate Department Head for Security, he managed the Protective Force and Physical/Technical Security Divisions. Prior to Lawrence Livermore, Jim had a 32 year career providing a broad spectrum of security services in state, federal, and corporate environments. Jim has an extensive background in managing security programs for the Department of Defense (DoD). He began his career as an Industrial Security Representative for the DoD and managed corporate DoD security programs for Hughes Aircraft Company, Rockwell International, and Honeywell. He performed as Program Security Manager for two major contractor DoD programs (MILSTAR and the National Aerospace Plane). He also managed the security program for the Port Authority of New York and New Jersey subsequent to the terrorist attack of 9/11. Jim is relocating to the Atlanta area with his wife, Karen, and German Shepherd Luka. He has grown daughters, a 6-year old granddaughter, and a stepson and family who reside in California. ●



PERSONNEL SUPPORT TEAM UPDATE

By Suwana Murchison, PST

COMPLIANCE ASSURANCE HIGHLIGHT:

–Notable Achievement (from the GTRI Code of Business Conduct)

We strive for achievements that advance technology, improve our society, and increase GTRI's reputation and renown as a world-class organization. These achievements are based on current competence and a determination to continually improve the organization and ourselves as individual professionals.

We pursue individual and organizational technical achievements. We always seek to perform at a high level of excellence in technical, administrative, and support work. GTRI's technical work and research support systems are nationally recognized. Our past and current research contracts were awarded because of these achievements; we are obligated to provide the same level of research excellence in the future.

We are a learning organization, working continually to improve ourselves and the organization through professional development. GTRI encourages all employees to take advantage of every opportunity for continuing their professional education and improving their job skills. Advanced educational opportunities allow our employees to further develop their professional capabilities and achieve a higher level of job performance. Further, in accordance with Georgia Tech guidelines for faculty promotion, an advanced degree in a relevant field is normally a qualification for promotion to a higher research faculty rank.

Compliance Q&A

–Ethics on the Job: Using Vacation Time to Attend a Conference

Q: I have an opportunity to make a presentation at a technical conference. The travel costs will be several thousand dollars, so I thought I would offer to charge my time to vacation or charge nothing for those days and make up the time on other days in the month if the lab director would be willing to pay for the conference travel and registration. Is that okay?

A: Probably. Either of the alternatives proposed is acceptable under GTRI policies and procedures. You would need to make a note on your travel authority and your travel expense statement under "Purpose of the Trip" that you were traveling to "Participate in _____ Conference."

Note: Trip is for personal professional development; it also benefits GTRI (or the project for A-projects). Time will be charged to vacation (or will not be charged); travel costs will be reimbursed per Institute policy."

NOTE: Institute workers' compensation insurance may not be applicable for such trips.

OPEN RECORDS ACT PROCEDURES

As a public institution, Georgia Tech is subject to the Open Records Act, O.C.G.A. § 50-18-70 et seq. (the "ORA"). The law requires that Georgia Tech make available for public inspection public documents within three business days of receiving a request. The purpose of these procedures is to ensure compliance with the law, while minimizing unnecessary costs to Georgia Tech. The Open Records Act covers what is expected of any Georgia Tech faculty or staff person who receives a request for records under the Open Records Act. The request does not have to be in writing and it is illegal not to respond to an Open Records Act request. For more information, please visit the web site for the Office of Legal Affairs: http://www.legalaffairs.gatech.edu/rec_dev.html

GEORGIA TECH POLICY ON NONDISCRIMINATION AND AFFIRMATIVE ACTION

The Georgia Institute of Technology is committed to affirmative implementation of equal employment opportunity in education and employment. The Institute does not discriminate against individuals on the basis of race, color, religion, sex, national origin, age, disability, sexual orientation, or veteran status in the administration of admissions policies, educational policies, employment policies, or any other Institute governed programs and activities. The Institute's non-discrimination policy applies to every member of the institute community.

Risk Management

September 26, 2007, CRB 238, 8:30 - 12:30

The main objective of the course is to introduce GTRI employees to the principles of Risk Management as a discipline that should be applied to all GTRI projects. The course will demonstrate a simple way to anticipate and be prepared for risks when they do occur, and also offer cost effective ways to cope with issues that affect all GTRI projects.

Industrial Contracting

October 3, 2007, CRB 238, 8:30 -1:30 (includes a working lunch. Lunch will be provided)

This course offers proven strategies used to obtain private industry contracts and it examines the rewards, restraints, research management requirements, as well as other issues. The course will feature updates on recent changes in industry contracting procedures and provide an opportunity to meet personnel in the Industry Contracting Office.

GTRI Project Management

October 17-18, 2007, CRB 119, (lunch will be provided both days) 8:30 - 4:30

This two-day intermediate-level class is designed for the young researcher who is ready to advance to managing their own project for the first time. The class focuses on the fundamentals of sound project management from proposal through project closeout. Designed for GTRI Research Faculty.

Intellectual Properties

November 7, 2007, CRB 238, 8:30 - 1:30 (includes a working lunch. Lunch will be provided)

PST is hosting a half-day "Excellence in Intellectual Property Decision Making" course on November 8, 2006 in CRB 238 from 8:30 am to 1:30 pm.

The objective of this course is to introduce GTRI employees to the techniques available for protecting intellectual property and using these techniques to increase business and revenue. Participants will learn how to better recognize patentable property (or property protected in other ways) and how to proceed in a way that optimizes protection for intellectual property. Resources to assist GT technical staff will be reviewed.

These courses are free to all GTRI employees. Register at this link:
<https://webwise.gtri.gatech.edu/pdcourse/signup.php>

OFFICE 2007 UPGRADE

Office 2007 will be installed on your computer soon! Come find out “What’s New in Office 2007”

This brown bag will cover:

- What has changed and what is new
- Collaboration Workshops and Tools
- Customizations
- Additional software: OneNote and Office Groove

After the training session several laptops will be available for users to explore Office 2007 and get a fresh look at Windows Vista.

(This is for CORE and EOSL users only)

Refreshments will be available.

Dates: September 6, 2007 CRB 119
October 4, 2007 CCRF (Large Conference room)

All sessions will begin at 11:00 and end at 12:00.

Space is limited, register using the link below.

<https://webwise.gtri.gatech.edu/pdcourse/signup.php>



GTRI COMMON AREA AND LAB CONFERENCE ROOM AND CONTACTS

Conference room requests are received by email, telephone or verbal request to the Support Services Dept. Each request is reviewed for availability.

After reserving the conference room, customers should submit a set-up email (i.e., number of attendees and set-up style) no less than 5-10 working days before the event. An acknowledgement that their request

has been processed and a reference work order number will be sent to Customers.

Customers are responsible for contacting IT for audio/visual needs. Email requests should go to ithelp@gtri.gatech.edu.

When outside guests will be coming in for the event, customers are responsible for contacting RSD at commandcenter@gtri.gatech.edu.

CAMPUS

- **Baker 319** – Seating capacity up to 21
Katherine Brown (404) 407-6027 Ginny Meyers (404)-407-6033
katherine.brown@gtri.gatech.edu virginia.myers@gtri.gatech.edu
- **CRB 119J** – Seating capacity up to 100, depending on set-up style
Mary Henderson (404) 407-6407 Tonya Tyner (404) 407-7322
ssdhelp@gtri.gatech.edu ssdhelp@gtri.gatech.edu
- **CRB 215** – Seating capacity 10 (additional chairs can be set-up along wall space)
Cindy Roberts (404) 407-7368 Starlyss McSlade (404) 407-7369
cindy.roberts@gtri.gatech.edu starlyss.mcslade@gtri.gatech.edu
Marie Little (404) 407-7479
marie.little@gtri.gatech.edu
- **CRB 238** – Seating capacity up to 30, depending on set-up style
Cindy Roberts (404) 407-7368 Starlyss McSlade (404) 407-7369
cindy.roberts@gtri.gatech.edu starlyss.mcslade@gtri.gatech.edu
Marie Little (404) 407-7479
marie.little@gtri.gatech.edu
- **CRB 503** – Seating capacity up to 18
Bettie McAdoo (404) 407-7796
bettie.mcadoo@gtri.gatech.edu
- **CRB 603** – Seating capacity up to 36
Annette Gaddis (404) 407-6445
annette.gaddis@gtri.gatech.edu

250 14th STREET

- Shelly Ward (404) 407-6017
shelly.ward@gtri.gatech.edu
- **119 A, B and C** – Seating capacity up to 180 total, or 60 each section, depending on set-up style
 - **Boardroom 519** – Seating capacity up to 40
 - **Auditorium** – Seating capacity up to 225

COBB COUNTY FACILITY

- Tana Higgins (770) 528-7003
ssdhelp@gtri.gatech.edu
- **Building 1-102** – Seating capacity up to 25
 - **Building 1-104** – Seating capacity up to 10
 - **Building 1-107 Auditorium** – Seating capacity up to 90, depending on set-up style
 - **Building 2-128** – Seating capacity 14 (additional chairs can be set-up along wall space)
 - **Building 2 conference room** is scheduled through the following website:
<http://seal-www.gtri.gatech.edu/DDB/CR2.html>
 - **Food Processing Technology (FoodPro) Facility**
Kristi Spivey (404) 894-3412
kristi.spivey@gtri.gatech.edu
 - **Executive Conference 103** – Seating capacity 20
 - **Sealed Air Conference 126** – Seating capacity 6
 - **Room G29** – Seating capacity 8

Awards & Outstanding Achievement

Bob Beasley (ELSYS) was promoted to Brigadier General on the Georgia Air National Guard retired list in a surprise ceremony in CRB on May 15, 2007.

Tom Pratt (ITTL) hooded his first PhD student at GT on May 5, 2007. Tom served on an ECE doctoral committee and had the honor of doing the hooding.

Neil Lareau (ELSYS), Lora Weiss (ATASL), and Gary Gimmestad (EOSL) were selected as GTRI Fellows.

Marie Little (DO) and Raj Vuchatu (ESD) graduated from the Georgia Tech Masters Series, a 9-month program that provides leadership training and mentoring to competitively selected staff in preparation for positions of more responsibility.

Paula Ferguson (HRL) and three “ringers” (her husband and two friends) came over to Atlanta to participate in the annual GTRI Golf Tournament on May 17. They fired a 58 and walked away with first place! The spring golf tournament raised approximately \$3,000 to benefit the Robert G. Shackelford Graduate Fellowship Fund.

Bill Melvin (SEAL) completed the 2006-07 Georgia Tech University Leadership Program (ULP) and was recognized as a ULP Fellow at a ceremony and dinner on May 1. The ULP seeks to identify Tech’s future academic leaders by selecting faculty members to participate in a series of seminars led by our senior academic and administrative executives.

42 research faculty were selected for promotion. This year we had our largest class of new Principals – 20 in all.

Ida Brown (RSD) was selected Chapter Chairperson for NCMS, Inc. (The Society of Industrial Security Professionals). This role positions her to influence changes and advance security policy decisions that are beneficial both to the chapter and to GTRI.

Ken Chaney (RSD) received his Industrial Security Professional (IS) certification March 07 from the National Classification Management Society (NCMS).

Bill Gregory (RSD) was selected for a Georgia Tech Outstanding Staff Performance Award.

Tom Horton (DO) was honored by the local chapter of the Armed Forces Communication and Electronic Association (AFCEA) with a Life Time Achievement Award. He has also been nominated to serve another year on the Executive Committee of AFCEA International.

Tom McDermott (ELSYS) was selected as a Senior Member of the Institute of Electrical and Electronic Engineers (IEEE).

GTRI Communications Office & GT Research News won the “Grand” award in the media relations program category in the District III competition and the Silver Medal from the National

Office of the Council for the Advancement and Support of Education (CASE) in the media category for “Promoting non-military research in a military focused organization”. Focused on the results (both media placements and return on investment [\$ back to researchers] GTRI got for the non-military stories promoted in the last year.

Jason Nadler (EOSL) has been awarded two patents for work he did while with ONERA in France. Please join me in congratulating Jason for this achievement that I know will lead to continued success as he establishes his research team in the Microelectronics and Nanotechnologies Group of EOSL.

Rusty Roberts (ITTL) has been elected Treasurer for 2007 by the International Test and Evaluation Association (ITEA) Board of Directors.

Congratulations to these 2006-2007 GT Best Practices Winners:

- **GTRI Business Services & Management and Project Support (MAPS)** (Runner-Up Winners) for their entry: Online Sponsored Project Deliverable Tracking & Submission System
- **GTRI Business Services** (Runner-Up Challenge Cup Trophy) for their entry: Report Central
- **EOSL/LandMARC** (Certificate of Excellence) for their entry: EOSL Admin Work Order System

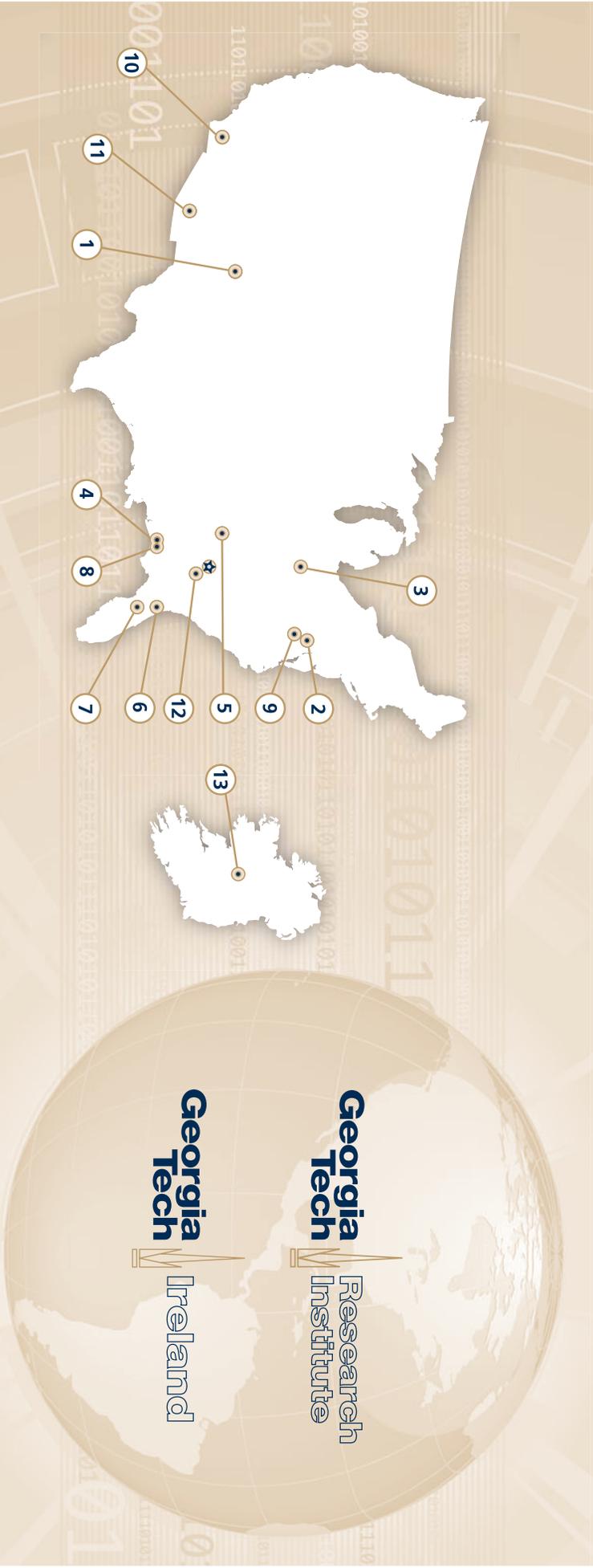
Two students in the Sensor Group of the Food Processing Technology Division in ATAS were recently recognized at the ATAS awards luncheon:

- **Parker G. McGee** received the ATAS Outstanding Undergraduate Student Achievement award for FY07 in recognition of his outstanding performance, creativity and resourcefulness in support of software development for automation in food production.
- **Daniel Shaw** received the ATAS Outstanding Graduate Student Achievement award for FY07 in recognition of his outstanding and innovative research in the area of Augmented Reality as applied to a poultry processing operation.
- **Jeff Kemp (SEAL)** was elevated to the grade of Senior Member in the IEEE in May 2007.

Dr. Greg Showman (SEAL) was elevated to Senior Member grade in the IEEE in June. Greg received endorsements from two DARPA program managers and one Northrop Grumman Fellow, both of which are GTRI sponsors.

If you'd like to submit an accolade for our next issue please email kenya.ervin@gtri.gatech.edu or GTRInsider@gtri.gatech.edu

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W W W . G T R I . G A T E C H . E D U



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	DEPT./LAB	NAME	TITLE	START DATE	DEPT./LAB	NAME	TITLE
12/13/06	ELSYS	RICHARD ROWLAND	PROFESSIONAL	3/5/07	STL	BISHOP, SHARON K.	PROGRAM MANAGER
12/18/06	ITTL	MICHAEL J. SCHORK	RESEARCH ENGINEER I	3/19/07	SS	CHRISTOPHER H. WILLIAMS	CUSTODIAN I
1/10/07	STL	KEVIN R. COOK	RESEARCH ENGINEER I	3/19/07	SS	AZIM S. HAMID	DELIVERY WORKER II
1/12/07	SEAL	DAVID J. LOCKLEAR	RESEARCH ENGINEER I	3/26/07	ISD	BRIAN S. WOODS	COMPUTER SERVICES SPEC II
1/12/07	EOSL	XIAOJUAN FU	RESEARCH ENGINEER II	6/18/07	EOSL	JAMES R. TEAGUE	PRINCIPAL RESEARCH SCIENTIST
1/22/07	STL	RICHART E. SLUSHER	PRINCIPAL RESEARCH SCIENTIST	4/24/07	SEAL	JAYDON M. ENTREKIN	ELECTRONICS TECHNICIAN I
1/25/07	ATAS	CHERI L. WIESMAN	PROJECT COORDINATOR II	5/14/07	STL	DEREK D. CAMPBELL	RESEARCH ENGINEER I
2/5/07	ELSYS	LARRY D. SMITH	RESEARCH ENGINEER I	5/17/07	ITTL	KAREN C. BOYLE	ADMIN ASSISTANT I
2/12/07	SEAL	DAMON C. NIX	RESEARCH ENGINEER I	5/22/07	EOSL	CHARLES A. HARDIN	RESEARCH ENGINEER I
2/14/07	HRL	JASON J. MERKEL	RESEARCH ENGINEER I	6/1/07	ELSYS	JAMES L. GURTNER	RESEARCH TECHNOLOGIST I
2/16/07	SEAL	JILL I. GOSTIN	SENIOR RESEARCH SCIENTIST	6/4/07	ELSYS	TIM MCCLUNE	RESEARCH ENGINEER I
2/19/07	SEAL	CHRISTOPHER D. BAILEY	RESEARCH ENGINEER II	4/16/07	SIO	RACHEL L. SLUSS-WARD	BUSINESS MANAGER
2/26/07	SS	GEORGE AGUILAR	CUSTODIAN I				

As of July 07

Goodbye From the GTRI Family!

RETIRES DATE	DEPT./LAB	NAME	TITLE	RETIRES DATE	DEPT./LAB	NAME	TITLE
1/17/07	SIO	WILLIAM E. EAGAR	SENIOR RESEARCH ENGINEER	4/1/07	EOSL	GRETA T. GUENTCHEVA	RESEARCH SCIENTIST I
2/1/07	STL	LINDA W. BIGHAM	ADMINISTRATIVE SUPERVISOR SR	4/1/07	SEAL	PERRY, BENJAMIN	SENIOR RESEARCH SCIENTIST
4/1/07	SEAL	BENJAMIN PERRY	SENIOR RESEARCH SCIENTIST	4/4/07	EOSL	KEESAH J. HALL	RESEARCH SCIENTIST II
4/1/07	DD	VIRGINIA C. YORK	SECRETARY ADMIN	5/1/07	ELSYS	DIANA E. ANTONI	SENIOR RESEARCH ENGINEER
5/1/07	SEAL	BENJAMIN PERRY	SENIOR RESEARCH SCIENTIST	5/12/07	ELSYS	ROBERT FRANKLIN MORRIS	RESEARCH ENGINEER I
5/1/07	EOSL	RUSSELL O. STANTON	SENIOR RESEARCH ENGINEER	5/17/07	ELSYS	MICHAEL SHANE OWENS	RESEARCH ENGINEER I
6/1/07	SEAL	JOHN K. DAHER	PRINCIPAL RESEARCH ENGINEER	5/26/07	EOSL	WILLIAM R. DOYLE	SENIOR RESEARCH SCIENTIST
7/1/07	ITTL	EDWARD GILMORE	TEMP PROFESSIONAL ADVISOR	6/8/07	ELSYS	IAN M. TURNER	RESEARCH SCIENTIST I
5/1/07	MS	JAMES W. GAINES	INSTRUMENT MAKER I	6/17/07	EOSL	RAYMOND A. PERRY	RESEARCH ENGINEER II
5/29/07	SS	DAVID L. JOHNSON	MAINTENANCE FOREMAN	6/24/07	EOSL	JASON H. PARRISH	RESEARCH ENGINEER I

As of July 07

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