The GTRI Connector

Did You Know...

There are about 100 million dogs and cats in the United States. Americans spend $5.4 billion on their pets each year.

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Rubber is one of the ingredients of bubble gum. It is the substance that allows the chewer to blow a bubble.

-- from *2210 Fascinating Facts* by David Louis

Vol. 12• No. 5 ***Published Monthly for the Georgia Tech Research Institute Family*** **March 1996**

Testing...Testing...1-2-3

Test and Evaluation Center Highlights GTRI's Capabilities

By Amanda Crowell, RCT

To survive in the post-Cold War world, U.S. space and defense industry leaders say they'll have to find cheaper and more efficient ways to test military products.

Enter Georgia Tech's new Test and Evaluation Research and Education Center (TEREC), through which Sam Blankenship (ELSYS) said researchers from across the campus will be working to address those very issues.

"The Department of Defense actually has some of the most interesting test and evaluation issues," said Blankenship, director of the new center. A commercial organization [has] the discipline of the market to tell them what's a good idea and what's not. But a peacetime military doesn't have that, so they have to test the products in something that simulates the operational environment.

"If you're building a new car, you can ... give 50 people the car, and they can drive it around the street for while and tell you what they think," he continued. "But you can't take 50 airplanes and go out and fight with them."

In fact, the idea for the center arose from discussions between the chief scientist of the Air Force Operational Testing and Evaluation Center (AFOTEC) in New Mexico, Blankenship and GTRI senior research engineer Donald Wilmot.

That was 1991. Now, five years later, the center is set to begin full operations July 1 with a budget of $1.1 million. Funding is still in the works, but Blankenship has gotten good responses from the military, particularly AFOTEC (which has provided $100,000 for startup costs), and companies like AT&T, Boeing and Lockheed-Martin.

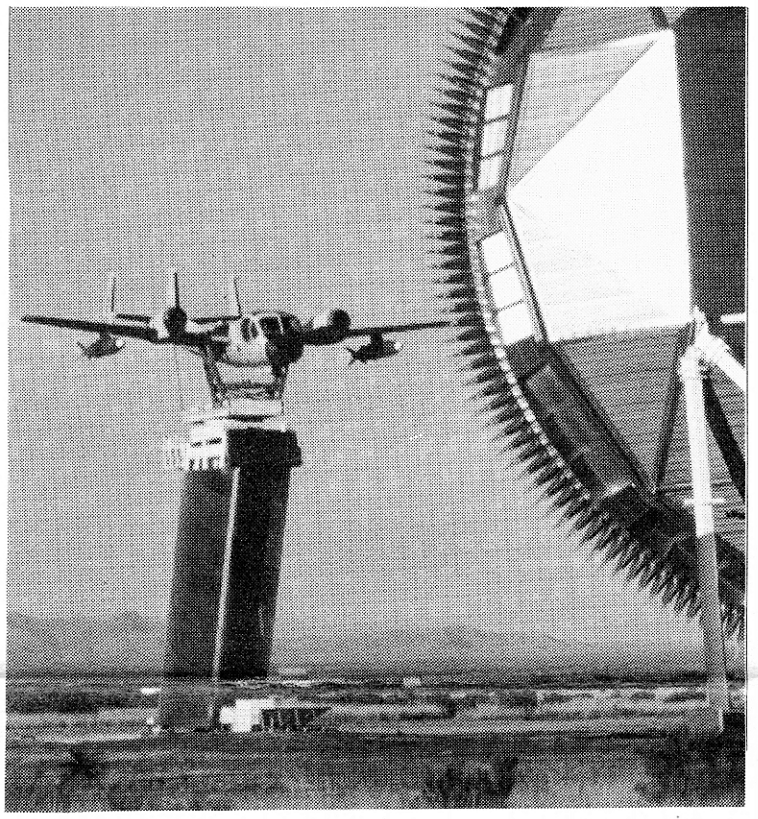
Along the way, Georgia Tech started the country's only test and evaluation graduate program, offering a master's degree certificate from either the School of Industrial and Systems Engineering or the School of Electrical and Computer Engineering.

The degree certificate program, which is separate from TEREC, is overseen by Jerry Banks, ISYE, and George Vachtsevanos, ECE. Students can take classes on campus or by video, and organizers hope to put them on the Internet.

TEREC will not have a central location, and its work will be done by professors and researchers across the campus, representing every school and laboratory.

One emerging topic of importance is how to quantify the economic value of test and evaluation in light of limited resources. Other areas of interest include microelectronic mechanical systems (MEMs), intelligent systems like fuzzy logic and neural networks, and fidelity and realism in computer modeling and simulation.

Organizers also may produce a scholarly journal and set up a visiting professorship. A board of advisors, made up of sponsor representatives, will control the center's operations and review its progress each year, Blankenship said.



The outdoor compact range at Ft. Huachuca, Ariz., was designed and built by GTRI and is an example of our test and evaluation capabilities. Military vehicles such as tanks and helicopters can be turned or tilted for antenna pattern tests that measure how the vehicles affect radiation patterns of antennas mounted on them. (File Photo)

Observed & Noted

The helicopter industry has recognized GTRI for leadership, service and contributions. *Learn more about the award on page 2.*

■

The new GTRI and Georgia Tech logos are available via FTP. *Find out the address on page 2.*

■

Georgia Tech research articles have a home in cyberspace. *Turn to page 3 for the Web address.*

■

Olympics questions fill much of page 3. *Learn from the answers to your colleagues' questions.*

■

A fourth junior faculty leader has been named. *Meet Robert Funk on page 4.*

■

Georgia Tech continues to rank among the nation's top universities in the volume of research it conducts. *To find out Tech's rankings, turn to page 4.*

■

Several GTRI researchers hold teaching fellowships this year. *See page 5 for a list.*

■

A GTRI acoustics researcher and his dancer/choreographer wife collaborated on a benefit performance. *Learn who, and what they did, on page 5.*

■

GTRI is represented on the Army Science Board by Richard Truly and Ed Reedy. *Read about their responsibilities on page 6.*

■

Three new employees' interests range from jukido, horseback riding and flying. *Meet them on page 7.*

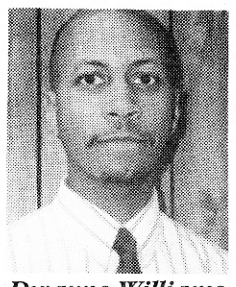
■

Lots of GTRI grads are mentioned on page 8, along with the professional, personnel and personal news. *Flip to the back page to read about their accomplishments.*

News & Notes

Meet Fiscal Services

Corrine Cloud



Dwayne Williams

Tracy Woods

Corrine Cloud

Corrine Cloud, a senior accounting assistant, began her career at Georgia Tech in the Financial Aid Office more than seven years ago. She transferred to the Fiscal Services department about a year later. Before coming to Tech, Corrine spent more than 15 years with Sherwin Williams and a year with Trust Co. Bank. Her duties include processing travel expenditures and consulting agreements, posting budgets and journal entries and disbursing checks. She holds an associate's degree in business administration from Clayton State College, where she is pursuing a bachelor of business administration degree. Corrine and her 17-year-old son, Corey, live in Henry County. When she's not working, Corrine enjoys watching Corey's basketball games; he's on the varsity team for Eagle's Landing High School.

Dwayne Williams

Dwayne Williams, a project director, has been with GTRI for a year and a quarter. Before coming to GTRI, he worked in the computing departments of several different companies. He says his varied experience comes in handy as he works on upgrading the Fiscal Services computer system to client/server technology. Dwayne grew up in Youngstown, Ohio, and attended Youngstown State University on a performance piano scholarship. His interest in computers gradually increased and he graduated with a degree in Computer Information Systems. After a visit to Atlanta while in college, Dwayne decided that he wanted to move here. He lives in Midtown with his cat, Man, and still enjoys playing the piano.

Tracy Woods

Tracy Woods, an administrative assistant, has more than nine years of experience in accounting areas at Georgia Tech. Before she joined Fiscal Services last May, Tracy worked in the Payroll Office. Some of her responsibilities include handling petty cash and balancing cash accounts, processing spreadsheets, travel expenditures, and registration for classes and seminars, and reviewing account projects for journal entries. Tracy has a diploma in data processing operations from DeKalb Tech and also has attended Dekalb College. She grew up in Decatur, where she still lives. A missionary for her church, Tracy also volunteers for the United Negro College Fund in her spare time.

Helicopter Industry Commends GTRI

GTRI received a Distinguished Achievement Award during the 1996 annual meeting of the Helicopter Association Intl. in Dallas, Texas, during February.

The award commended GTRI for "dynamic leadership, dedicated service and lasting contributions which have advanced the civil helicopter as a safe and effective transport vehicle."

Congratulations to Chuck Stancil (AERO) and the GTRI Atlanta Short Haul Transportation System (ASTS) team for this impressive recognition from the helicopter industry. The GTRI group has worked extremely hard and made an extraordinary effort to keep ASTS on track!

New Logos Available by FTP

The new logos for GTRI and Georgia Tech are available on the Georgia Tech network at the VPEA FTP site. You can access them via standard FTP or through your Web Browser at <<ftp://ftp.gatech.edu/pub/vpea/>>.

The logos are available in the following formats:

- EPS-Illustrator
- EPS Photoshop
- Windows Metafile
- GIF
- PICT
- TIFF

If you have any problems with the electronic files, call the Office of Information Technology's Customer Support Center at 894-7173.

SELECTED FEBRUARY 1996 AWARDS

Title	PI/Laboratory	Sponsor	Funded Amount
Israeli Air Force H-53 Data Processing and Analy. Prog.	Zion, H. (AERO)	Air Force	$ 22,753
Atlanta Short Haul Transportation System	Stancil, C. (AERO)	SAIC	40,000
MH-60G Structural Integrity Modifications	Crawford, C. (AERO)	Air Force	185,000
Kalman Filtering for Precision Emitter Location	Schlag, K. (ELSYS)	U. S. Dept. of Defense	168,788
Electronic Test Process Development	Eagar, W. (ELSYS)	Air Force	213,750
Pave Low IIIE EW System Integration	Brooks, J. (ELSYS)	Air Force	555,017
ATIRCM Jammer Common Missile Warning System Modeling Software	Lamm, D. (EOEML)	Army	108,422
Design & Development of a 4-Channel IO Interferometer	Hartman, N. (EOEML)	Photonic Sensor Systems Inc.	53,000
Metalorganic Molecular Beam Epitaxy & Processing Techniques for Flexible...	Summers, C. (EOEML)	Army	140,281
Flight Mission Simulator/Digital (FMS/D) Development	Frost, M. (HRO)	Army	249,198
(U) Adaptive Communications for Integrated Avionics	Moss, R. (ITL)	Air Force	465,309
Transceiver Susceptibility Analysis	Moss, R. (ITL)	Army	148,500
JECSIM JFS Test & Evaluation	Scoville, J. (SDL)	ASI Systems Intl.	130,302
Laser Rangefinder Simulator	Roberts, R. (SDL)	CTA Inc.	90,584
Radar Simulator & Seeker Support C4ISR Test Capability Roadmap	Muzio, A. (SDL)	Army	89,594
Advanced Airborne Inteceptor Simulator (AAIS)	Roberts, R. (SDL)	Westinghouse	430,000
EAS/Medical Device E3 Test Center - Phase II Support	Woody, J. (SEAL)	IEASMA	45,738
Technical Support of the MMW Instru. Radar System	Moore, L. (SEAL)	Army	143,996
EMC Testing	Santamaria, J. (SEAL)	Nordson Corp.	43,044
ECCM Assessment Analysis	Morris, G. (SEAL)	Air Force	95,000
Battlefield Environment & Performance Simulator	Saffold, J. (SEAL)	Army	100,000
SOF E3 Program - FY 94/95	Millard, D. (SEAL)	Air Force	100,000
Develop. & Analy. of Innovative MMW Smoke Materials	Perry, B. (SEAL)	Army	192,500
Conformal Aperature Velocity Sonar (CAVES) Concept Evaluation and Testing (U)	Caille, G. (SEAL)	Navy	200,000
Radar Hardware Development Analysis	Belcher, M. (SEAL)	Army	1,400,000
Workshops and Documents	Meadors, J. (STL)	U.S. Dept. of Defense	1,302,967

Countdown to 1996

Will GTRI faculty be restricted, because of security concerns, in what we can carry to our offices when we come in by shuttle? For example, can we bring in spare parts for a machine that is broken?

The policy will be that items brought into the Research Controlled Area (RCA) will be visually checked by security. As long as the item can be viewed to ensure that it poses no threat to security, it will be allowed. This policy will apply to the Village Secure Zone (VSZ) and the sporting venues, as well. However, X-ray and magnetometers will be used in those zones for additional security. Items that will be prohibited in all zones are mace/pepper gas, guns, knives, alcohol, weapons and personal security devices.

Where will the parking lots be located for employees who have chosen to drive?

Parking will be available at the Southern Regional Education Board (SREB), the Institute for Paper Science and Technology (IPST), the Center for Rehabilitative Technology E&W(CRT), the 10th Street Lot and the Georgia State University Apartments Parking Deck. Employees parking in any of these lots will be expected to walk from the lots to campus. Employees who work in SREB, IPST and CRT will be given priority for those lots, and the 10th Street lot will be used primarily for handicapped employees and official vehicles. Shuttle service to campus is tentatively scheduled from the IBM Deck, Georgia Public Television, Atlantic Steel and the 14th Street Georgia Tech Foundation property.

Where will the shuttle "deliver" people and what time will we need to arrive at the parking lot?

The shuttles will drop off passengers at one of the entry control points around campus. For those employees whose buildings are not near an entry control point, an internal shuttle will be provided. However, the shuttles will not operate between zones. One parking lot will be designated for 24-hour access and a mode of transportation will be available in each Zone/Area 24 hours a day.

What are the current plans for access to the campus area and the satellite parking lots?

All campus streets will be closed to public traffic, as will Tech Parkway and North Avenue from I-75/85 to Luckie Street. 10th Street from Techwood Drive to Northside Drive will be restricted to buses and official vehicles and Northside Drive will have lane closures. Employees who are assigned to park in one of the lots on 10th Street will be given a vehicle credential (probably a decal) that will be recognizable to the Atlanta Police Department (APD) and will allow the vehicle access to 10th Street. The I-75/85 exit ramps to 14th Street and North Avenue will remain open. The APD has not determined where the check points for vehicle access will be located or the best routes to the satellite lots.

Where will additional MARTA park-and-ride lots be located?

The list of proposed MARTA park-and-ride lots can be found on page 23 of *Getting Through Summer 1996: The Official Guide to the Olympic Summer for Georgia Tech Faculty and Staff.* For additional copies of the guide, contact Ashley Gigandet at 894-3648 or ashley.gigandet@facilities.gatech.edu.

Will MARTA buses take patrons from the lots to a MARTA station and back to the lots? How often and how late?

MARTA will operate 24 hours a day during the Olympics (July 19 - August 4, 1996) and from 4:43 a.m. to 1 a.m. for the rest of the summer. Shuttle buses to and from satellite MARTA park-and-ride lots will run from approximately 6 a.m. to 2 a.m. each day.

Will we be able to alternate driving to work with using the free MARTA card?

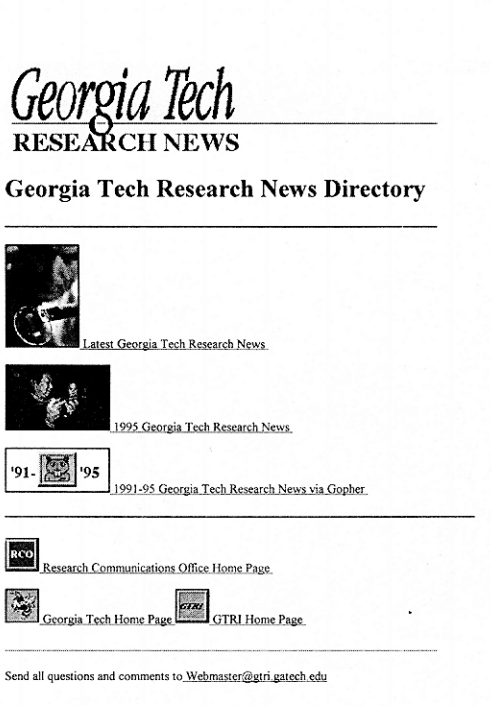
No. Employees are asked to choose between driving and taking MARTA. The free MARTA card will not be given to those employees who have chosen to drive, and parking places will not be available for those employees who have chosen to take MARTA.

News & Notes

Research Articles, News Releases in Cyberspace

Articles and news releases on Georgia Tech research are available electronically, via the World Wide Web and electronic mail.

The latest issues of *Research Horizons* are available on the Web at <http://www.gtri.gatech. edu/res-hor/rh-welcome.html>. The most recent news releases can be accessed at <http://www.gtri.gatech.edu/res-news/rchnews.html>. Pre-1995 news releases and *Horizons* issues are in Gopher files, accessible from the Web. The *1995 GTRI Annual Report* is also available by following a link from the GTRI home page, <http://www.gtri.gatech.edu>.



These materials can be printed, with any included graphics and photographs, by using Netscape or other compatible browser. The text can also be saved for insertion into other documents by using Netscape's "save as plain text" option.

Rick Robinson (RCT) and Jean Sands (ITL) prepared the materials for posting.

You may also receive the text of news releases from the Research Communications Team via an electronic mailing list. To subscribe, send an e-mail note to <listproc@gtri.gatech.edu>. In the body of the note, include only the command "subscribe GTResearchNews FNamer LName," where you insert your first and last name. If you have questions, contact John Toon at <john.toon@gtri.gatech.edu>.

Keep Our Buildings Safe

You're heading home after a long, productive day at work. As you exit your building, a delivery person outside asks you to let him inside to leave a package. It's 6 p.m., and the front desk person is gone for the day.

What should you do?

Don't let the person in the building. Package deliveries should never be made after hours if no one is at the front desk, says Bob Lang, director of the Research Security Department.

"If a visitor is to meet someone, wants to pick up a package or needs to deliver one, that person can use the phone outside the CRB and other buildings," he said. "Your security awareness is necessary, especially now that the world's focus is on us."

The Georgia Tech Research News Directory includes news releases since 1991 and Research Horizons issues since 1995.

Focus on Research

Aerospace Research is Interest of Fourth Junior Faculty Leader

By Joey Goddard, OCA

One of Georgia Tech's own has been named GTRI's fourth junior research faculty leader. Robert Funk has been a part of the Aerospace Sciences Laboratory (AERO) since December, but has been a fixture on campus for almost 10 years. He joins Lisa Lust of STL, Margaret Loper of ITL and Gisele Welch of EOEML as one of the first members of this program.

Funk, who specializes in experimental aerodynamics, received a bachelor's degree in aerospace engineering from Georgia Tech in 1990 and a Ph.D. in aerospace engineering from Tech in 1995. Along the way, he also worked as a graduate research assistant in the School of Aerospace Engineering.

The Junior Research Faculty Leader Program brings to GTRI people whose early research careers show strong levels of accomplishment and promise. Junior research faculty members, who typically have less than 10 years of experience, are tasked to develop nationally recognized programs with major impacts on GTRI. This faculty leader program, outlined in the latest edition of the *GTRI Policies and Procedures Manual*, draws support from a combination of laboratory, sponsor, and short-term research operations funds.

Funk's work with experimental aerodynamics has led to the development of a technique called spatial correlation velocimetry (SCV). This technique uses light sheets and smoke to visualize air movement. Images of the flow are digitized and correlated to determine spatial shifts of the smoke patterns in the flow. This process allows researchers to look at the progression of movement and measure the flow velocity in a plane.

"Most methods involve measuring the velocity of only one point at a time," said Funk, "this technique lets you know the velocity across many different points at once."

The advantage of SCV, Funk explained, is that it is difficult to recreate a specific event for each different point on a plane. Using SCV, researchers can be certain that each point that is measured is exposed to the same event.

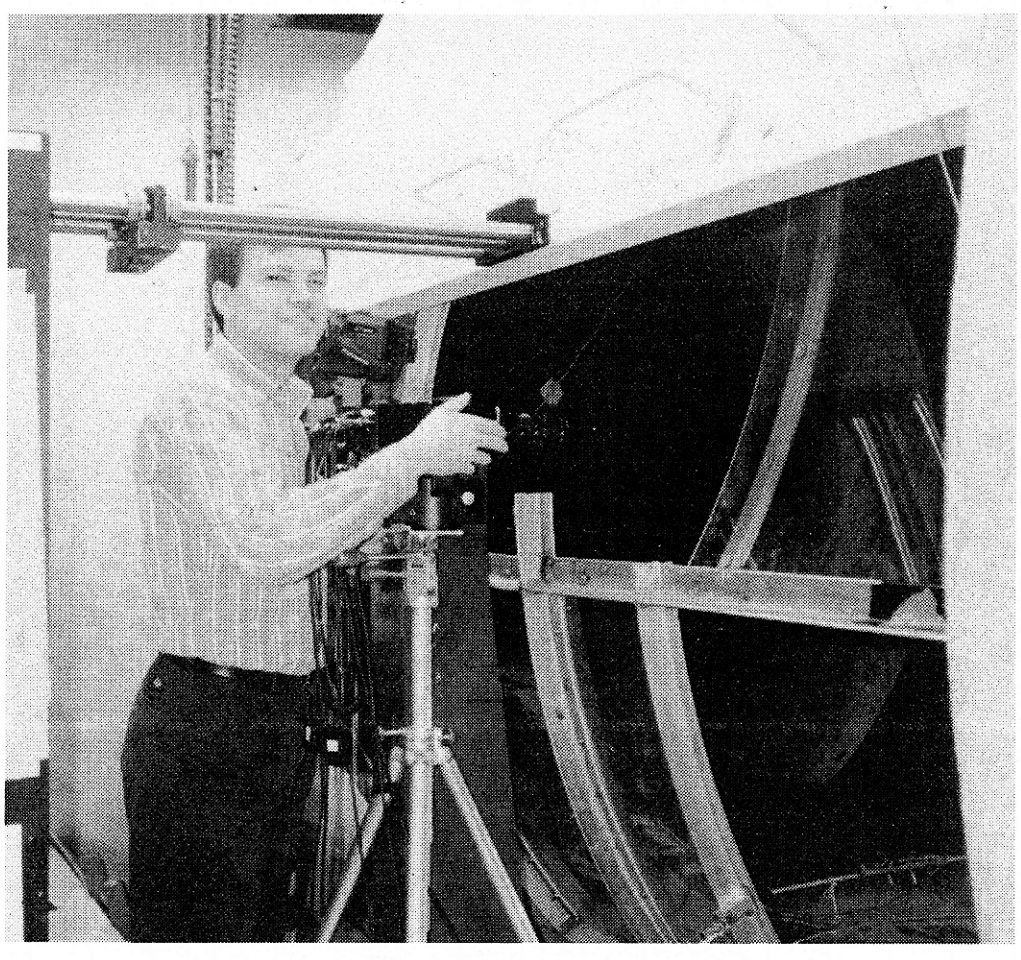
Funk, who grew up in Tampa, Fla., lives in Austell with his wife, Denise, a Tech graduate in civil engineering.

He jokes that his decision to study aerospace engineering was due to a "lack of good judgment" but quickly adds that he has always had a fascination with things that fly. His reasons for coming to Tech are more practical.

"I had decided to go to aerospace engineering school and there were not a lot of places around with that kind of program or reputation," Funk said.

Funk says that the opportunity to work for GTRI was a case of being in the right place at the right time. "GTRI provided a good research environment without being totally academic," he said. He added that he enjoys the work he is doing with aerodynamics and rotorcraft and is excited about the chance to work with environmental acoustics.

One such project that Funk is working on is the Atlanta Short-Haul Transportation System (ASTS), which will study large-scale helicopter operations in an urban setting. The study will take place during the Olympics and will examine the use of a global positioning system in traffic management, particularly to guide helicopters.



Robert Funk's work with experimental aerodynamics uses light sheets and smoke to visualize air movement. (Photo by Joey Goddard)

Georgia Tech Maintains Top Rank in Research R&D

By John Toon, RCT

Georgia Tech continues to rank among the nation's top universities in the volume of research it conducts, statistics compiled by the National Science Foundation show.

For fiscal 1994 — the latest year for which comparison statistics are available — Georgia Tech ranked fourth among all U.S. colleges and universities in the dollar volume of research conducted in two key categories: engineering and computer science. While the federal government provides the largest portion of its research support, Georgia Tech ranked sixth among all U.S. colleges and universities in the amount of industry-sponsored research received.

Within specific engineering disciplines, Georgia Tech ranked second nationally in the amount of electrical engineering research, fourth in aerospace engineering, sixth in mechanical engineering, ninth in metallurgical and materials engineering and 14th in civil engineering. Among the physical sciences, Georgia Tech ranked 14th in the amount of physics research.

Overall, Georgia Tech ranked 29th nationally in total research and development expenditures with $193 million in 1994, up slightly more than 10 percent from the $175 million reported in fiscal 1993. The growth moved Georgia Tech up two notches, from 31st place in 1993.

"In an era of uncertainty for research and development funding, Georgia Tech continues to gain market share," said Jean-Lou Chameau, Georgia Tech's vice-provost for research and dean of graduate studies. "This says a lot about the quality of our work, faculty, researchers and students. We are very pleased with our continued historic strengths in engineering, but also with the rapid improvements we are making in the sciences."

Pointing to Georgia Tech's expanding relationships with industry, he added: "We are indebted to our industry partners who are critical to our success, and plan to increase our interaction and research activities with industry."

Because they are collected in a consistent manner, the National Science Foundation statistics are considered the most reliable indicator of research volume at U.S. colleges and universities. Selected NSF statistics from "Academic Science and Engineering R&D Expenditures, FY 1994," are available on the World Wide Web at <http://www.qrc.com/nsf/srs/rdexp/94dst/dsttabs.htm>.

You can learn more about Georgia Tech's NSF rankings by examining the charts on pages 6 and 7.

Home of the 1996 Olympic Village
Georgia Tech Research Institute

Focus on Research

Teaching Fellowships FY 96

These GTRI researchers are sharing their knowledge with Georgia Tech students in the classroom:

Researcher	School	Course Title
Jim Echard & Mark Richards	ECE	Radar Signal Processing
Krishan Ahuja	AE	Aeroacoustics of Flight Vehicles and Automobiles
Marilyn Smith	AE	High Speed Aerodynamics
		Hypersonic Aerodynamics
Robert Michelson	AE	Avionics for Unmanned Vehicles
James Sowell	PHYS	Introduction to Astronomy
		Introduction to Solar Systems, Stars and Galaxies
John Nemeth	CEE	Environmental Management
Jim Clark	TEX	Planning and Control in Textile Production
David Jacobi	BIO	Ecology and Aquatic Lab
Nick Faust	CP	Integration of Vector and Raster GIS Data
Michael Rowan & Nick Faust	CP	Remote Sensing and Mapping
Robert Schwerzel	CHEM	Physical Organic Chemistry
Henry Paris	MAT	Materials Course - MATE 3703
Jack Lackey	ME	Materials Selection in Mechanical Design
Brian Stevens	AE	Stochastic Methods in Guidance and Navigation
Gary Tjaden	ISYE	Information Revolution
Ron Bohlander	ME	Computer Integrated Manufacturing Systems

Caspalls Merge Acoustics, Dance for a Good Cause

By Amanda Crowell, RCT

As a GTRI acoustics engineer and a drummer in a local band, Jayme Caspall (SEAL) is no stranger to being creative with sound.

And although his work in the Undersea Research Program offers plenty of challenges, Jayme recently turned his talents to something a little less scientific and little more fun — props for a local dance show.

Drawing on the inspiration of other perfomance artists, the 1988 Georgia Tech graduate built three large, wooden triangles, each equipped with touch-activated transducers.

The transducers sent signals to a Musical Instrument Digital Interface (MIDI) controller, which then matched each signal with a pre-recorded sound stored in its memory. So when the dancers touched the tranducers, they produced their own "musical" accompaniment, with sounds ranging from standard drum beats to a metal rod striking a garbage dumpster.

"Everything sprung from the performance," Jayme said. "Nothing was piped in. It was really kind of neat."

More importantly, the work was for a good cause. The dance show was a fundraiser for the Grady Adolescent AIDS Program, which offers care, support, education and counseling for adolescents and teen-agers infected with the HIV virus or AIDS.

The "Peepshow '96, Peek-a-Boo!" performance, held in January at the Georgia Tech Center for the Arts, was produced by Keyhole Entertainment, Inc. This year's fundraiser marks the third for the nonprofit organization, which recruits local artists — all of whom work for free — for its shows.

For Jayme, there's a special connection: his wife is the group's treasurer. A creative spirit in her own right, Lisa Caspall is a dancer and choreographer who teaches at Gwinnett Dance Academy in Stone Mountain.

She also choreographed the dance to go with Jayme's props. The resulting piece, titled "The Rhythm Method," featured Lisa and fellow dancers Chris Whitmire (Keyhole's founder) and Jeff Hinds.

The dance opened with one of the triangles rising slowly from the orchestra pit via a hydraulic lift. All three dancers were inside the triangle, using the transducers to produce a rhythmic beat that matched the music of the previous piece.

"We wanted to create the illusion that [the previous song] was still playing," Lisa said.

When the center triangle was in place, curtains onstage rose to reveal the other two. Following the transitional rhythm, Whitmire and Hinds leap-frogged to their own triangles as Lisa used the transducers in hers to produce a "hopping" sound.

Midway through the piece, the rhythm evolved into the chanting beat of Queen's "We Will Rock You," at which point a guitarist appeared onstage to provide the song's wailing guitar climax.

The uniqueness of the piece pleased both the dancers and the audience, Lisa said. "This is the one I think they [went] home remembering."

Although the dance lasted only about five minutes, Jayme spent nearly a month building the triangles, which measure 11 feet on each side. He also spent $700 of his own money.

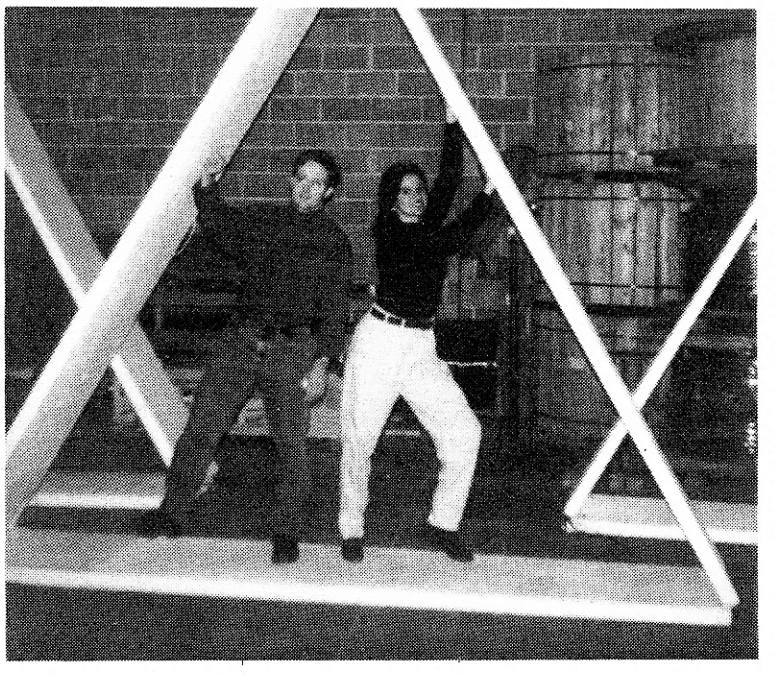
"I just wanted to do it," Jayme said. "You get an idea ... and the costs start mounting up, but you want to see it done."

For both the Caspalls, the project offered a unique opportunity to share their skills in a creative way.

"It was just nice to be able to work with Jayme, combining what he does and what I do," Lisa said. "It's not every day you get to do that with your husband."

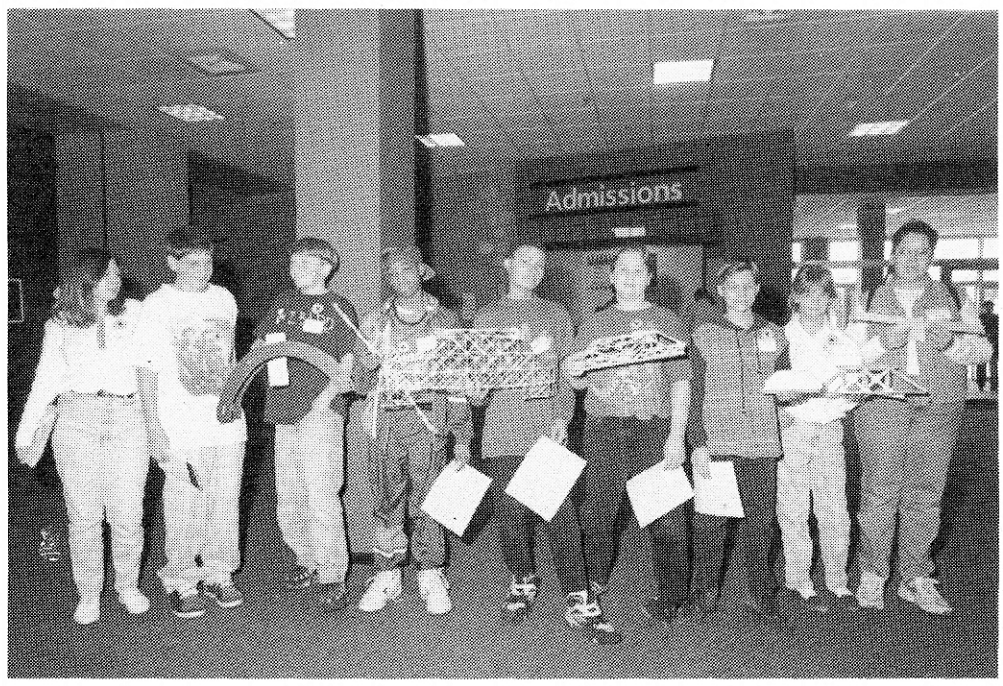
And along the way, the Caspalls discovered another family connection between GTRI and the dance world: Deidra Trebits, one of about two dozen dancers recruited for the show, is the daughter of Bob Trebits, director of the SEAL, which oversees the Undersea Research Program where Jayme works.

Do you employ your work skills and talents after hours to benefit those in need? Do you apply them in your hobbies? If so, let THE CONNECTOR know — we'd like to feature your activities in an upcoming issue. You may contact Lea McLees at 894-4259, phone; 894-6983, fax; lea.mclees@gtri.gatech.edu, e-mail; or stop by Rm. 223 CRB.



Jayme Caspall (SEAL), left, and his wife, Lisa, show the transducer-equipped wooden triangles Jayme built for a performance Lisa choreographed. The dance was part of a show benefitting the Grady Adolescent AIDS Program. (Photo by Amanda Crowell)

Focus on Folks



These young people celebrated National Engineers Week by entering the toothpick bridge-building event on February 24 at SciTrek. The future engineers entered either the tradional Toothpick Category or the new Open-Material Category. Sponsor for the event was the Society of Manufacturing Engineers Atlanta Chapter, and GTRI employees were among those assisting with the contest. (Photo by Rae Adams)

Truly, Reedy Serving on Army Science Board

By Amanda Crowell, RCT

It's always an honor when GTRI staff members are chosen to serve on advisory boards for the military or top-ranked businesses.

But for Richard Truly, GTRI's director, serving on the Army Science Board is also a practical matter.

"Prestige and honor are one thing, but what the Army needs is good advice," said Truly, who was appointed to the board last year.

Truly joins GTRI colleague Ed Reedy, who has served officially on the Army Science Board since 1994. Reedy, director of GTRI's Research Operations, said he's worked with Army research and development programs since 1970, when he was an active duty officer.

"I not only enjoy my association with the board, but believe it provides advantages and benefits for both the Army and GTRI," Reedy said.

The Army Science Board is an independent advisory panel appointed by the Secretary of the Army. Its approximately 100 members, who include representatives from universities and private industry as well as retired military experts, study and advise the Army on a wide range of technology issues.

Both Reedy and Truly offer a wealth of technical expertise to the board, particularly in the areas of electrical and aeronautical engineering. Truly also is a former astronaut/head of NASA, and both men have served in the military — Reedy in the Army and Truly in the Navy.

"The Army Science Board attempts to include a diverse group of national experts in a variety of technical fields who can provide the Army with sound technical advice," Reedy said. "Hopefully, Dick, with his unique background in space technology, and [I, with] my background in radar and electronic warfare, can offer the Army sound advice."

Although other GTRI members have served on the board in the past, Truly said it's unusual for two people from one organization to serve at the same time.

Advisors are divided into standing committees or issue groups, including "Infrastructure and Environment," "Personnel and Medical" and "Research and Advanced Concepts." Truly serves on the Missile Defense committee, while Reedy is working in the area of Analysis, Test and Evaluation.

Board members also tackle a handful of "burning issues" each year, culminating in an intensive, two-week summer briefing with Army personnel, Truly said. This year, he's co-chairing a study on Unmanned Aerial Vehicles (UAVs).

Reedy currently is involved in an issue group assessment of the Army's digitalization efforts and an upcoming major Army exercise to evaluate progress in this area.

"All in all, it takes a good bit of our time," Truly said. "However, the Army is one of our biggest customers. Therefore, we're dedicated to making sure they get the support not only from our research, but also from our participation on the Army Science Board."

Board members also must remember that they're working for the Army, not themselves. Strict conflict of interest rules apply, as they do for any advisory board of experts.

"The simplest test," said Truly, who also is a Georgia Tech vice president, "is, 'Is there a way I can make money out of this?' If you start thinking that, you should stop and ask, 'Why am I thinking this?' because your job is to advise the Army."

Are you serving on an advisory board? If so, let THE CONNECTOR know — we'd like to highlight your contributions. You may contact Lea McLees at 894-4259, phone; 894-6983, fax; lea.mclees@gtri.gatech.edu, e-mail; or stop by Rm. 223 CRB.

Total R&D Expenditures in Engineering at Universities and Colleges

		1994	1993
1)	Johns Hopkins University	$210.5 M	$203.0 M
2)	Mass. Inst. of Technology	$153.5 M	$155.2 M
3)	Penn. State University	$129.3 M	$118.5 M
4)	**Georgia Institute of Technology**	**$125.0 M**	**$115.5 M**
5)	University of Texas, Austin	$106.7 M	$99.2 M
6)	Stanford University	$92.9 M	$90.8 M
7)	University of Michigan	$88.8 M	$74.7 M
8)	Texas A&M University	$82.6 M	$77.4 M
9)	University of California, Berkeley	$61.7 M	$62.0 M
10)	North Carolina University, Raleigh	$58.9 M	$48.2 M

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Total R&D Expenditures in the Computer Sciences at Universities and Colleges

		1994	1993
1)	Johns Hopkins University	$82.0 M	$73.0 M
2)	Carnegie Mellon University	$58.8 M	$53.8 M
3)	University of Southern California	$33.4 M	$35.0 M
4)	**Georgia Institute of Technology**	**$20.9 M**	**$20.8 M**
5)	Cornell University	$20.1 M	$28.3 M
6)	University of Michigan	$16.6 M	$19.7 M
7)	University of Minnesota	$15.7 M	$11.3 M
8)	University of Tennessee System	$15.3 M	$8.4 M
9)	University of Maryland, College Park	$14.0 M	$9.4 M
10)	University of Texas, Austin	$14.0 M	$14.3 M

GTRI Greetings

Welcome to some of our newest employees!

Ten Good Things We Know About Selim Akkoc

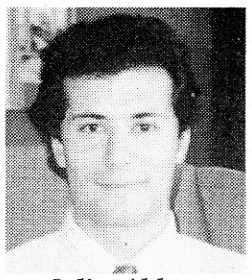
1. He is a student assistant in the Networks Application Integration Lab of the Information, Technology and Telecommunications Lab.
2. Selim is a senior electrical engineering major graduating next fall.
3. He is responsible for system administration, and assists staff with various research projects.
4. Before working for GTRI, Selim was a co-op for IBM in Austin, Texas.
5. His goal is to own a telecommunication networking company.
6. Selim moved to the United States from Turkey when he was 13.
7. His parents live in Mobile, Ala., where his father is a professor of math for Springhill College.
8. Selim lives with his brother, who is working on a master's degree in civil engineering at Tech.
9. He has earned the second patch in the martial art of jukido.
10. In his spare time, Selim likes hiking, camping and pottery.

Ten Good Things We Know About Nancy Girard

1. She joined the Personnel Support Team in August as a Personnel Assistant I.
2. Nancy is responsible for recruiting, coordinating and placing all student assistants in GTRI.
3. Her experience in student staffing began in college as a student assistant at Georgia State University (GSU).
4. Nancy graduated from GSU in June1995 with a bachelor's degree in human resources.
5. She plans to go back to GSU in the fall to begin working on a master's degree.
6. Nancy met her husband, Chris, while working as a section editor of the GSU yearbook.
7. She and Chris have two cats, Beezwax and Toonces, and a dog, Onyx.
8. Nancy spends most of her spare time working on her house in Roswell.
9. She also enjoys riding her mom's horses.
10. Nancy and Chris are planning a sightseeing trip to London this March.

Ten Good Things We Know About Russell McCrory

1. Russell works as a Research Engineer I in the Systems Integration Branch of ELSYS.
2. His major responsibilities are in software programming.
3. Russell graduated from Vanderbilt University in 1994 with a bachelor's degree in electrical engineering and computer science.
4. In September 1995, he completed his master's degree in electrical engineering from Georgia Tech.
5. He would like to continue working at GTRI while he pursues a Ph.D. in electrical engineering and hopes to start next fall.
6. As an undergraduate, Russell worked in various research and programming jobs, but once picked grapes for a winery in Tennessee.
7. He grew up in Nashville, Tenn., where his parents still live.
8. Russell was always interested in computers as a child and always wanted to be an engineer.
9. He is working on getting his private pilot's license and is a member of the Yellow Jacket Flying Club.
10. He has restored a classic 1966 Mustang Convertible, which is kept in his parents' garage.


Selim Akkoc


Nancy Girard


Russell McCrory

Focus on Folks

Industry-Sponsored R&D Expenditures at Universities and Colleges

		1994	1993
1)	Mass. Inst. of Technology	$55.5 M	$58.1 M
2)	Penn. State University	$45.4 M	$41.7 M
3)	University of Washington	$33.2 M	$30.8 M
4)	Duke University	$30.2 M	$34.6 M
5)	Texas A&M University	$28.6 M	$27.2 M
6)	**Georgia Institute of Technology**	**$27.8 M**	**$28.9 M**
7)	University of Michigan	$26.7 M	$26.7 M
8)	University of Minnesota	$23.7 M	$21.5 M
9)	North Carolina State University, Raleigh	$22.1 M	$22.2 M
10)	Purdue University	$21.6 M	$13.2 M

A New CONNECTOR Helper

You'll be seeing a new name on some CONNECTOR stories starting this month. Joey Goddard (OCA) is taking on the duties that RCT's graduate research assistant, Rick Robinson, handled before he began working on RCT's Web pages late last year. Joey will introduce longtime and current employees ("Meet Fiscal Services" on page 2 and "GTRI Greetings" on page 7) and get Olympics-related questions answered ("Countdown to 1996" on page 3) for you. She'll also write about issues of interest to GTRI and interview GTRI researchers about their work ("Aerospace Research is Interest of Fourth Junior Faculty Leader," page 4).

Joey has a bachelor's degree in journalism from the University of Georgia and is pursuing a master's degree in communications from Georgia State University. In OCA she finds and tracks funding opportunities and edits research proposals.

Focus on Folks

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Professional Activities

Advanced Programs Office

Jennie Lincoln is leading a six-person team during March and April for USAID. The team will evaluate its $12 million Democratic Initiatives Program in the Dominican Republic.

Electro-Optics, Environment and Materials Laboratory

Steve Hays, **Wendy Jones** and **Kirk Mahan** recently conducted two OSHA Update and Safety Awareness seminars at Dalton College and Augusta Tech. More than 200 people attended these sessions, which were funded through the Georgia Manufacturing Extension Alliance (GMEA). Mahan also conducted an OSHA Compliance Seminar for the Georgia Electrical Industry Council's annual meeting.

Three publications produced by Communications Training and Technology Branch research staff won awards in the Society for Technical Communication's regional competition. They are: Centerpoint, a publication for the Hazardous Substance Research Centers Program—Award of Excellence—**Nancy Davis**, **Leigh McElvaney**, **Mark Hodges**; Poultry Tech, a publication of the Agricultural Technology Research Program—Award of Excellence—**Stephanie Babbitt**, **Rae Adams**, **Mark Hodges**; and Research Briefs, a series of publications of the South and Southwest Hazardous Substance Research Center—Award of Merit—**Leigh McElvaney**, **Nancy Davis**, **Mark Hodges**.

Charlene Bayer was an invited speaker at the recent Southern Aerosol Technical Association meeting. She spoke about her EPA aerosol characterization study. Bayer also was invited to speak at the American Chemical Society National Meeting in New Orleans. The title of her talk was "Is Chromatography Really Necessary in Indoor Air Analyses?"

On March 4 **Craig Wyvill** gave an appreciation luncheon for all who worked on the Agricultural Technology Research Program. A total of 45 people attended. The "Chicken Little" award was given to Dan Campbell for his dedication to the program.

On Jan. 31 **Claudia Huff** was one of the presenters of the Factory Automation Support Technology (FAST) prototype at TRAINING '96, an annual event for training and development professionals. FAST is a hands-free learning tool that delivers information to the user when and where it's needed. It consists of wearable technology that augments reality with a visor-mounted screen and wireless communication links. On Feb. 17 Huff moderated a panel at Currents '96, a regional conference of the Society for Technical Communication. The panel addressed "The Electronic Edge: Applying Multimedia to Training."

Personnel News

New Hires

ITL welcomes **Brian Barnes**, GRA; **Todd Grossweiler**, Student Assistant; **Lauren Ringle**, Student Assistant; and **Ivan Tacic**, GRA. PST welcomes **Charlotte Batson**, GRA. EOEML welcomes **Christopher Chritton**, GRA; **Giancarlo Giannetti**, Student Temp; **John Gossett**, Student Assistant; **Tonia Morris**, GRA; **Derya Ozyurt**, GRA; **Charles Piety**, GRA; and **Gisele Welch**, RE II. AIST welcomes **Jeffrey Corn**, Student Temp; and **Vincent Calhoun**, Computer Service Specialist III. ELSYS welcomes **Daniel Feren**, Student Temp; **Maria Melton**, Student Temp; **Jeffrey Miller**, Student Temp; and **Vaibhav Parmar**, Student Assistant. AERO welcomes **Mary Lyn Rivamonte**, Student Temp; and **Jason Stauch**, Student Temp. HRO welcomes **Jay Romine**, RE II.

Moving On

Bruce Chin, **Paul Dudley**, **Muhammad Rahmatullah**, **Manisha Shah** and **Abbas Torabi** (EOEML); **Russell Miller** (SSD); **Ravi Naidu** (PST); **John Butler** and **Katise Long** (AIST) are moving on.

Transfers

Carmen Daniels, Admin. Assist., has transferred from AIST to APO effective Jan. 4.

Tom Horton, SRA, has transferred from ITL to APO effective Jan. 1.

Lee Hughey, RE II, has transferred from AIST to APO effective Jan. 4.

Stephen Price, Electronics Specialist, transferred from SDL to SEAL on March 1.

Personal Notes

Cradle Roll

Andrea and **Preston Bates** (AERO) welcomed their second son, Samuel Harper, on Jan 28.

Lisa Detter-Hoskin (EOEML) and her husband, Bob, welcomed a daughter, Hannah Lee, on Feb. 18.

Donna and **Bob Schmitter** (EOEML) welcomed a son, John Weston Arthur, on Feb. 9.

Ann and **Paul Schlumper** (EOEML) welcomed a son, Jack Howard, on March 1.

Our Sympathy

...to **Kirk Mahan**, whose father-in-law died Feb. 29.

...to **Mike Cathcart**, whose father passed away March 2.

Our Great Graduates

Fred Wright completed his doctorate in electrical engineering in March. A Research Engineer II in ELSYS, Fred heads the Integrated Effectiveness Branch. His adviser was Serena Zabin (ECE).

Leigh Hinton (SEAL) completed a bachelor's degree of business administration in management at Georgia State University. Leigh worked part-time in SEAL as secretary for Marvin Cohen, and begins her first full-time job in Norfolk Southern Railway's customer service accounting department in April.

Jay Katz (ELSYS) completed a bachelor's degree in electrical engineering at Georgia Tech. A student assistant, Jay created project management software using Visual dBase. He also created a differential receiver card under the direction of Tim Strike. Jay set up hardware and software on PCs, maintained upgrades and troubleshot PC problems. He begins work in April as a product engineer with Motorola, Semiconductor Products Sector, in the Static Fast RAM Division in Austin, Texas.

Tuyen Tran (EOEML) earned a doctorate in physics from Georgia Tech. He works in EOEML's quantum microstructures branch. His thesis topic was "Optical Properties of II-VI Epitaxial Layers and Superlattice Structures," and his adviser was Chris Summers (EOEML). Tuyen will be working with Intel in Portland, Or., after graduation.

Matt Hommiller (SEAL) earned a master's degree in electrical engineering from Georgia Tech. A GRA, he worked in 1) component modeling and circuit simulation, and 2) graphical programming. Matt has earned the 10th Tech degree in his immediate family. He and his brothers Frank and Stephen each hold two Tech degrees; his sisters-in-law, Sandra and Annette, brother, Dan, and Matt's wife, Judy, each hold one.

Bruce Beckloff (EOEML) completed a master's degree in ceramic engineering from Georgia Tech. As a GRA in the Advanced Material Technology Division, he researched the chemical vapor deposition of thin films for use in solar cells. His thesis topic was "Chemical Vapor Deposition of Titanium Diboride and Polycrystalline Silicon for Use in Thin Film Solar Cells," and Jack Lackey (EOEML) was his adviser. Bruce is moving to Dallas, Texas, to work for Texas Instruments in their Digital Imaging Ventures Project.

Look for more graduates in the April issue!