The GTRI Connector

Vol. 12• No. 7 *Published Monthly for the Georgia Tech Research Institute Family* May 1996

Did You Know...

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

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A bee can handle 300 times its own weight, which is equivalent to a human being pulling a 10-ton trailer.

-- from *2210 Fascinating Facts* by David Louis

For the 1996 Summer Olympics

GTRI's Valuable Volunteers Make A Difference

By Joey Goddard, OCA

You may not know it, but GTRI is home to some world-class Olympians.

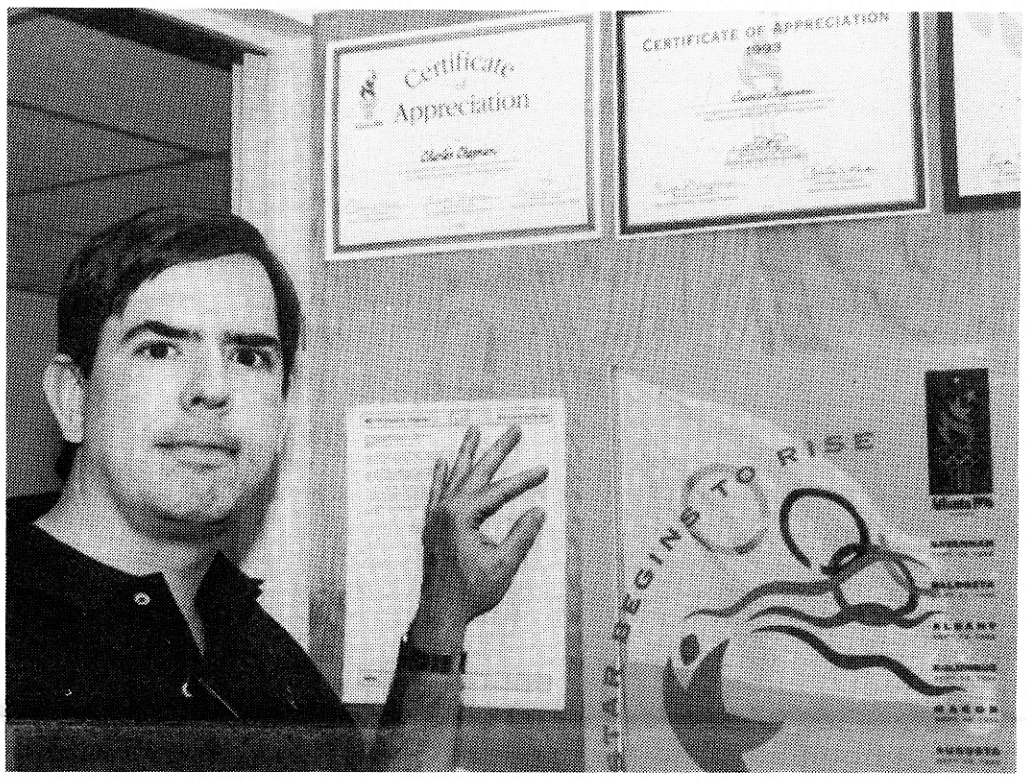
At least seven of our colleagues are making Atlanta's Olympic Games a winner by being among more than 40,000 volunteers for the 1996 event.

Volunteers will work in hundreds of different positions, from medical aide to ticket taker, says Atlanta Committee for the Olympic Games (ACOG) spokesperson Pressley Harris.

"They will play an integral part in making the Games run smoothly," Harris said. "The spirit and commitment of these volunteers will be the single greatest factor toward making Atlanta's Olympics the best ever."

Assignments for volunteers are made based on the preferences, skills and interests of the applicants. **Tom Yang**, a graduate research assistant in EOEML, will use his knowledge of Chinese Mandarin to serve as a language agent, helping those who might have trouble communicating because of a language barrier. Yang will be working primarily at the badminton venue at Georgia State University.

"I'm very excited to be involved with this. It's a once in a lifetime thing," said Yang.



Chuck Chapman (SDL) is one of at least seven GTRI employees volunteering with the 1996 Summer Olympics. Most recently he helped with auditions for the thousands of performers who will appear in the opening and closing ceremonies. See page 5 for pictures of more GTRI volunteers. (Photo by Rick Robinson)

Rich Combes, who is working on a Ph.D. in History and Technology, will work as a host during the Cultural Olympiad. Combes, a senior research engineer in EOEML, will be a docent for a traveling Smithsonian exhibit on Duke Ellington, which will be on display at the Clark Atlanta University Library.

"This fits in well with my interests in history and museums, and in jazz," Combes said. "I'm really looking forward to it."

Some volunteers were asked to participate because of their involvement in various sports. **Michael Gray**, who works as a research engineer in SEAL, was contacted by the United States Weightlifting Federation (USWF). Gray, a USWF registered lifter, won a silver medal in his weight class at the 1995 Georgia Games. He helped out at the Paul Anderson Memorial Weightlifting Invitational in August 1995, and was thrilled to be asked to work during the Olympics.

"I had a really good time at the test event," Gray said. "It was a really good experience for me to be able to meet prominent international lifters."

Robert Kerr, a senior research engineer in SDL, was selected to assist at the rowing venue on Lake Lanier because of his association with the Atlanta Rowing Club (ARC). He volunteered at the U.S. Rowing National Championships on Lake

Continued on page 5

Observed & Noted

This month we meet members of PST's employment recruitment group. *Turn to page 2 to read about your colleagues.*

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Questions, questions! An entire page is filled with answers to your colleagues' latest Olympics inquiries. *Turn to page 3 to learn helpful information.*

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The aerial robotics competition has a new mission and a new location. *Get the details from the story on page 4.*

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GTRI researchers will be collecting data from a hydrogen-fueled, electric-powered bus during the Olympics. *Find out what they'll learn, and how, on page 4.*

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Employees are marking milestones. *Recognize your 25-year and 10-year colleagues on page 6.*

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Georgia Tech has a new addition to its virtual parallel supercomputer. *Find out what's available, and how it can help you, on page 6.*

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Jim Suggs is the "sultan of substrates." *Meet Jim and two additional new employees on page 7.*

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The back page is filled with professional, personnel and personal news. *Flip to page 8 to catch up!*

News & Notes

Mary Austin

Nancy Girard

Terry Jones

Linda Nettles

Meet the Personnel Support Team

Last month we met some of the folks on the Personnel Support Team (PST), managed by Eunice Glover. This month we will meet some of the members of PST's employment/recruitment group (ERG). This group supports GTRI through all phases of the hiring process. As a liaison between GTRI and the Office of Human Resources, the ERG is responsible for applicant recruitment, screening and tracking, salary administration and processing new hires. The ERG also processes evaluations, ensures compliance with state and federal regulations, advises on personnel problems, and assists in training and development.

Mary Austin, a personnel support specialist, handles employment, recruitment and personnel matters for various GTRI units and labs, as well as tracking and reviewing applications for research faculty positions. Before joining PST two years ago, Mary worked in many different aspects of human resources at Bryan Foods, a subsidiary of Sara Lee. For her exceptional work during her eight years there, Mary was selected to participate in Sara Lee's mentoring program. She received a bachelor's degree in business administration from Alcorn State University in Lorman, Miss., and a master's degree in employee relations from Mississippi State University in Oxford, Miss. She lives in Powder Springs with her 15-year-old daughter, Mesia, an accomplished musician and athlete. Some of Mary's hobbies include speed walking, swimming, music, gardening and creating silk flower arrangements.

Nancy Girard, a personnel assistant, recruits, coordinates and places all student assistants in GTRI. Although she only joined PST last August, her experience in student employment began much earlier; while attending Georgia State University (GSU), she worked as a student assistant. In 1995, Nancy graduated from GSU with a bachelor's degree in human resources; she plans to return there in the fall to begin working on a master's degree. She and husband Chris have two cats, Beezwax and Toonces, and a dog, Onyx. The two spend most of their free time working on their house in Roswell. But when she gets the chance, Nancy also enjoys reading and horseback riding.

Terry Jones, personnel support specialist, has been with PST since August. She handles employment, recruitment and personnel matters for various GTRI units and labs, as well as tracking and reviewing applications for faculty research positions. Before coming to GTRI, she was general manager of a small company that teaches adults and children circus arts: tightrope, trapeze, Spanish web (a long rope performers shimmy up and hold onto while performing ballet moves in the air), clowning and more. Terry holds a bachelor's degree in economics from Clarion University in Pennsylvania and a master's degree in personnel from Georgia State University. She has three children: Chad, 13, Jeromy, 11, and Jennifer, 9. They live in Candler Park, along with two dogs and three hamsters. In her spare time, Terry enjoys reading, traveling and running. She plans to complete the Peachtree Road Race for the sixth year in a row.

Linda Nettles, an administrative assistant, has worked for GTRI for seven years. She is responsible for providing administrative support to the hiring process. Linda has a bachelor's degree in management and an associate's degree in secretarial science from Dyke College in Cleveland, Ohio. When she is not working, Linda likes watching sports and spending time with her two granddaughters, Camille and Brandy. She and her husband, Otis, live in Austell, near her son and daughter.

SELECTED APRIL 1996 AWARDS

Title	PI/Laboratory	Sponsor	Funded Amount
Continued Development & Systems Analysis of Pneumastic Technology...	Englar, R. (AERO)	NASA	$ 129,950
Measurement Technology Development to Validate Duct Liner Propagation Models	Ahuja, K. (AERO)	NASA	50,000
Multi-Chip Module for Electromechanical Control Activiation Systems	Strike, T. (ELSYS)	Army	49,998
ECIT Infrastructure	McDougal, G. (ELSYS)	CTA Inc.	99,199
Analysis of Shading Problem on Asphalt Roofing Shingles	Doll, T. (EOEML)	Owens Corning Fiberglass	82,479
CD-ROM Training Program	Hodges, M. (EOEML)	Ga. Dept. of Education	59,700
Software Process Improvement	Miller, M. (HRO)	Army	144,894
System Engineering Support to Comanche Program	Grover, J. (ITL)	Rail Co.	73,331
SWBS Phase 3	Pennywitt, K. (ITL)	Logicon Eagle Technology	111,351
Evaluation of Microwave Technology	Williams, A. (SDL)	Army	168,641
Advanced Airborne Interceptor Simulator (AAIS)	Roberts, R. (SDL)	Northrop Grumman	290,000
MATCALS Performance Analysis	Perry, B. (SEAL)	Navy	46,335
Battlefield Environment & Performance Simulator	Saffold, J. (SEAL)	Army	150,000
Radar Hardware Development Analysis	Belcher, M. (SEAL)	Army	150,000

(Look for more April awards in the June/July issue.)

Countdown to 1996

What are the beginning and ending dates that the gates to the Research Controlled Area (RCA) will be in place?

The entire campus will be secured from July 1 to August 10, 1996. That includes the RCA, the Village Secure Zone (VSZ), and the Venue Zones (VZ).

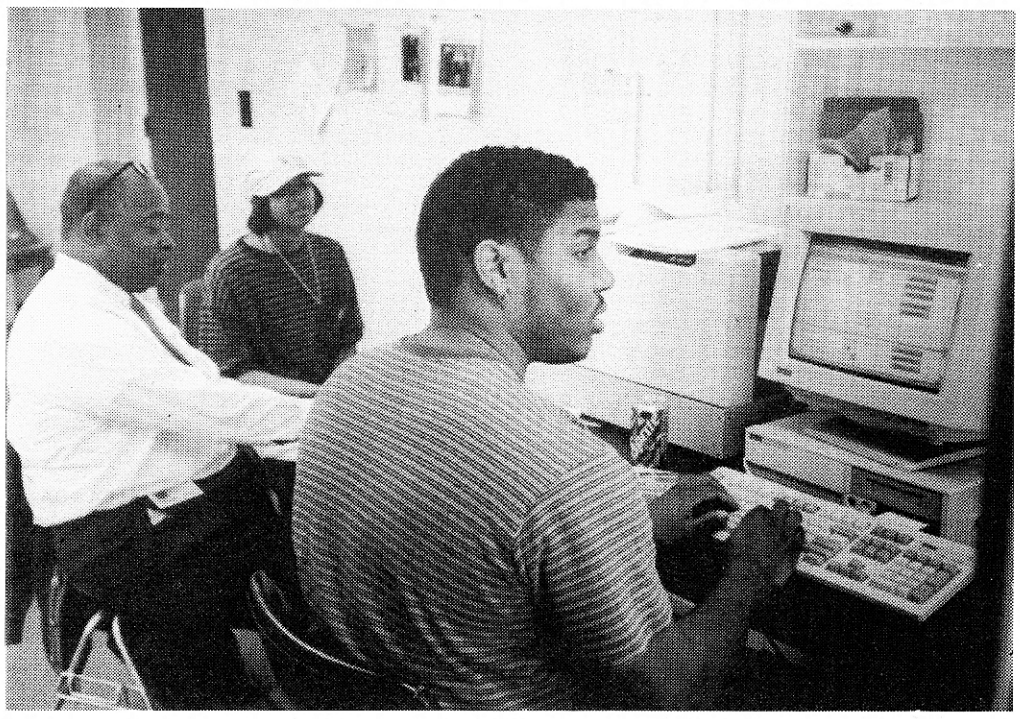
I've heard about day passes into the Village Secure Zone for people who occasionally need access. How does this work?

There are two types of day passes: escorted and unescorted. Those in the RCA who require frequent access to the VSZ or VZ can be issued a special two-part badge that allows them to pick up a day pass and enter a security zone without having an escort. To obtain a two-part unescorted badge, an employee must undergo a background check and go to the ACOG accreditation center to have a picture and hand geometry badge prepared.

Escorted day passes for the Village Secure Zone and the Venue Zones must be requested from the Research Security Department (RSD) between 7:00 a.m. and 5:00 p.m. at least 48 hours in advance. Once the request has been processed, you will be given instructions for picking up your day pass at a Day Pass Center, located in the RCA. Photo identification must be left at the Day Pass Center while you have the day pass, and you must be accompanied at all times by someone accredited for the area you are visiting.

Essential visitors and vendors who have bona fide business reasons to be on campus may also request a day pass for access into any of the three secure areas. Employees expecting visitors should notify Research Security between 7:00 a.m. and 5:00 p.m. at least 48 hours in advance of the expected visit. The employee who requested the day pass will be contacted and told when the visitor should report to the ACOG Visitor's Center in the IBM building on 14th Street. A shuttle will bring visitors from the ACOG Visitor's Center to campus. Picture identification will be required for entry into the Village Secure Zone or the Venue Zones, and an accredited employee must remain with their visitor at all times while the visitor is on campus.

What will the process be for sending and receiving Federal Express packages during the Olympics? Where will packages be delivered and what is the estimated delivery time?



Research Security's Jason Reynolds, front, Xavier Bryant and Scherie Tukes collect information and take employee photos for Research Controlled Area (RCA) badges. The badges will allow employees access to the RCA during Olympics-related secure periods this summer. (Photo by Lea McLees)

Departments located in the RCA will be able to send and receive packages just as they are sent and received now. Departments located in the VSZ or VZ will take overnight delivery packages to a central collection point for pick up and delivery. If needed, departments can arrange to have incoming packages sent to the satellite Georgia Tech Post Office at 811 Marietta Street for delivery the following business day.

Will Tech Temps be allowed to work during the Games, and, if so, what kind of accreditation will they need?

Tech Temps will be allowed to work on campus during the Olympic secure period only if their job functions are essential to operations. Tech Temps will require the same kind of accreditation as permanent employees for the zones in which they will work.

How will I know when my campus parking lot will be closed and when the satellite parking lots will be opened? When will a definite, final list of satellite parking lots be available?

A pre-Olympic parking transition plan is scheduled for publication in late May; it will provide information for parking before, during and after the Olympics.

Will all the alternative transportation options be in place by the time the parking lots close? Will shuttle service be available that early?

Yes. The special MARTA card will be good from June 15 to Aug. 15. Those who have chosen to drive to work will be assigned to a satellite parking lot before their regular employee lot closes.

I plan to park at a satellite lot in Cobb County—at Kennesaw State College, Town Center Mall, etc. Who is providing shuttle service from those locations and how can I find out schedules and other information?

These lots have been proposed as ACOG park-and-ride lots. If you have chosen the MARTA option, you will be entitled to free parking in these lots and will be shuttled to a MARTA transit station by an ACOG furnished bus free of charge for the entire time the MARTA card is valid. Schedules and operating hours will be published for all Georgia Tech employees as soon as they are received.

What happens if we lose either our GTRI badge or RCA badge between June 1 and August 27?

If you lose your badge for the RCA, VSZ or VZ you will have to go to the ACOG Visitor's Center located in the IBM building on 14th Street and request a visitor's badge for access to the RCA. Once in the RCA you will need to report to RSD for a new RCA badge. If the lost badge gives you access to the VSZ or VZ, you must go to the ACOG rebadging center in the Mason Civil Engineering Building to obtain a replacement badge before you will be allowed to enter either of these zones.

Will we be able to use SportsLife once SAC is closed? How will the system work and when will it start and end?

All employees will have access to SportsLife during the summer of 1996. You will be asked to take your GT/GTRI picture ID card to SAC to obtain a special sticker that will be honored at all SportsLife facilities in Atlanta.

Focus on Research

New Location, Mission for Aerial Robotics Competition

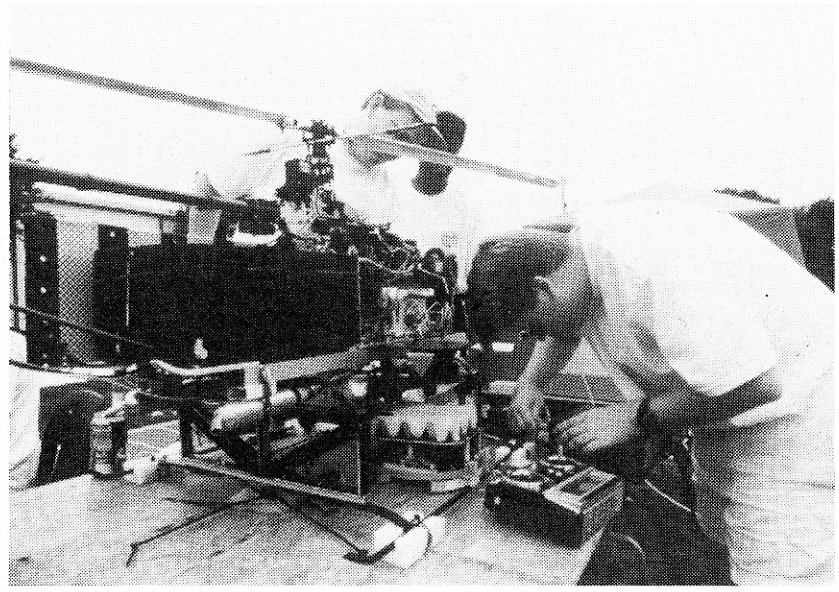
By Lea McLees, RCT

A summertime tradition on campus has a new mission and a new location this year.

The International Aerial Robotics Competition will be held at EPCOT Center in Orlando, Fla.'s Disney World on July 15, while Olympics preparations are being made here.

The new mission for the competing college and university teams addresses the need for unmanned vehicles that can locate and remediate toxic waste in industrialized nations. Competing college and university teams must create aerial robots that can map a simulated toxic waste dump containing radioactive and biohazardous materials.

"The simulated dump will contain six labeled 55-gallon steel or plastic drums, either fully exposed or partially buried, at unknown locations in the competition arena," said competition organizer Rob Michelson (AERO). The mission is to map the location of the toxic waste drums, identify their contents, and retrieve a sample from one of the drums -- a small metal disk located on a drum. The mission must be executed in less than one hour by a fully autonomous flying robot and will involve no input from a human operator.



Georgia Tech students prepare their craft for last year's aerial robotics competition. (File Photo)

A total of 13 teams from across the United States, Canada and Switzerland are scheduled to enter vehicles this year, up three teams from last year.

"The teams have sent in videos showing their flying machines," said Michelson, past president and technical chairman for the event's sponsor, the Association for Unmanned Vehicle Systems Intl. (AUVSI). "We are expecting helicopters, tailsitters, a vehicle that relies on a balloon and four rotors, and a blimp."

Many of the teams will use Global Positioning System (GPS) navigation strategies, Michelson says. That's in part due to the Stanford University team's 1995 success using differential GPS. The first team to use GPS, Stanford accomplished more than any other entrant in the competition's five-year history.

"A Canadian GPS manufacturer has agreed to supply GPS receivers to any team that wants one — for free," Michelson said. "Just having a GPS receiver isn't the answer to all navigation problems, but it will help greatly. The Stanford approach to GPS used other algorithms to achieve the extreme accuracy that they demonstrated, and not all teams will implement that approach."

In previous years, robotic vehicles had to locate and retrieve randomly placed metal disks, fly them across a barrier one at a time, and deposit them in another bin autonomously — without direct human control. Stanford's craft retrieved a disk and flew across the barrier autonomously, but was unable to deposit the disk in the bin on the other side.

A tuition prize of up to $10,000 is still offered to the top teams.

Based on his experience with the competition over the last five years, Michelson says two big challenges remain for each team.

Continued on page 7

Hydrogen Bus Provides Data, Transportation During Olympics

By Amanda Crowell, RCT

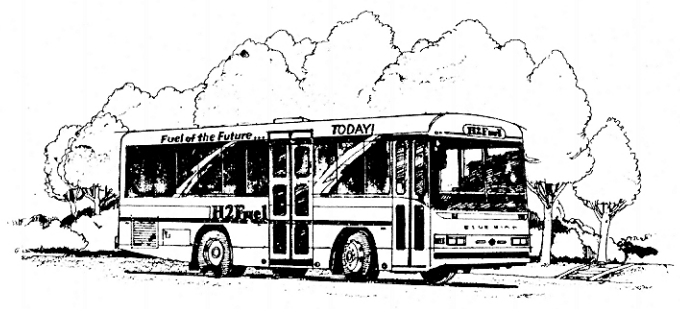
When nearly two million people stream into Atlanta this summer for the Olympic Games, the city's transportation-related pollution is expected to surge as well.

But at least one group, which includes researchers in GTRI's Aerospace Sciences Laboratory, is working to counter these problems, by showcasing a prototype hydrogen-fueled, electric-powered bus for urban transportation.

The H2Fuel Bus Project is the result of combined efforts over several years by industry, government and research institutions, with primary funding from the U.S. Department of Energy.

Supporters say hydrogen, the universe's most abundant element, is an ideal replacement for fossil fuels, whose burning causes air pollution and global warming. It could be converted from water through renewable processes like wind power, producing a sustainable energy source and virtually no pollution.

GTRI researchers will integrate the 33-foot, transit-style bus's internal combustion engine, electrical generator and metal hydride fuel storage system. They'll test the bus during the Olympics, using it to transport Georgia Tech employees, to give the project maximum public exposure and to gather data on costs, reliability and the concept's commercial readiness.



The H2Fuel Bus Project will provide GTRI researchers with data on costs, reliability, and the commercial readiness of the hybrid hydrogen bus concept. (Illustration by Mac Evans)

The hybrid bus is expected to operate at double the efficiency of a comparable diesel bus, have twice the operating range (150 miles) of an all-electric, battery-powered bus and produce near- zero air emissions.

"Currently, we anticipate this unique combination of technologies to give the bus increased range and competitive efficiency," said John C. Handley (AERO).

Partners on the H2Fuel Bus Project include the DOE's Savannah River Site near Augusta, Ga., Westinghouse Savannah River Co.'s HyTech Laboratory, the Southeastern Technology Center in Augusta, Blue Bird Body Co. of Fort Valley, Ga., Northrop Grumman Automotive Systems of Maryland and Hydrogen Consultants, Inc. of Colorado.

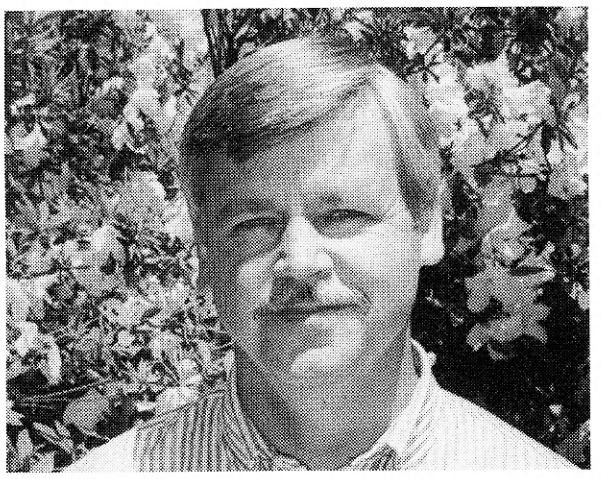
Other partners include the Augusta-Richmond County Public Transit, which will own the bus and use it after the Olympics, and the Education, Research and Development Association of Georgia Universities.

The bus's fuel technology will use metal hydrides, which absorb and retain hydrogen in a solid form when cooled, then release it slowly when heated. Hydrogen in this solid form is much safer than when it is a compressed gas or liquid.

Supporters of the H2Fuel Bus Project hope that if it succeeds, it will bring new business development and manufacturing jobs to workers in the Savannah River area, in both Georgia and South Carolina.

Home of the 1996 Olympic Village
Georgia Tech Research Institute

Focus on Research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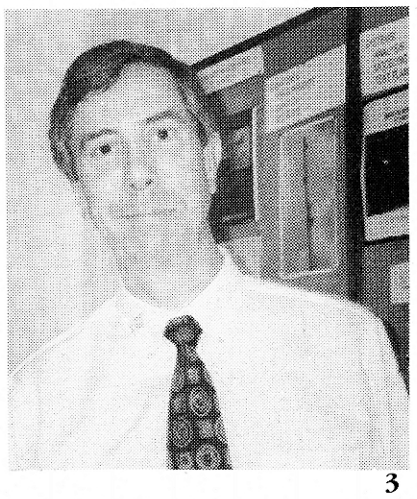
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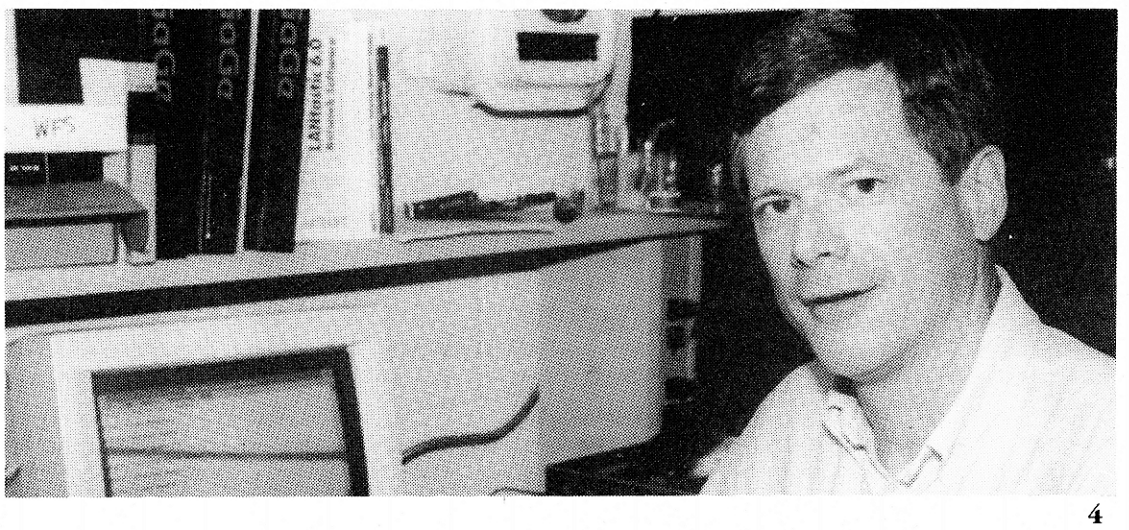
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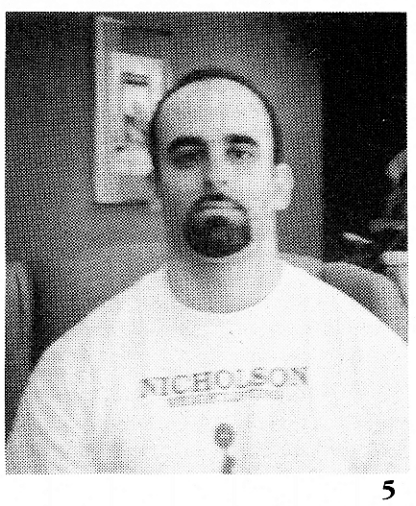

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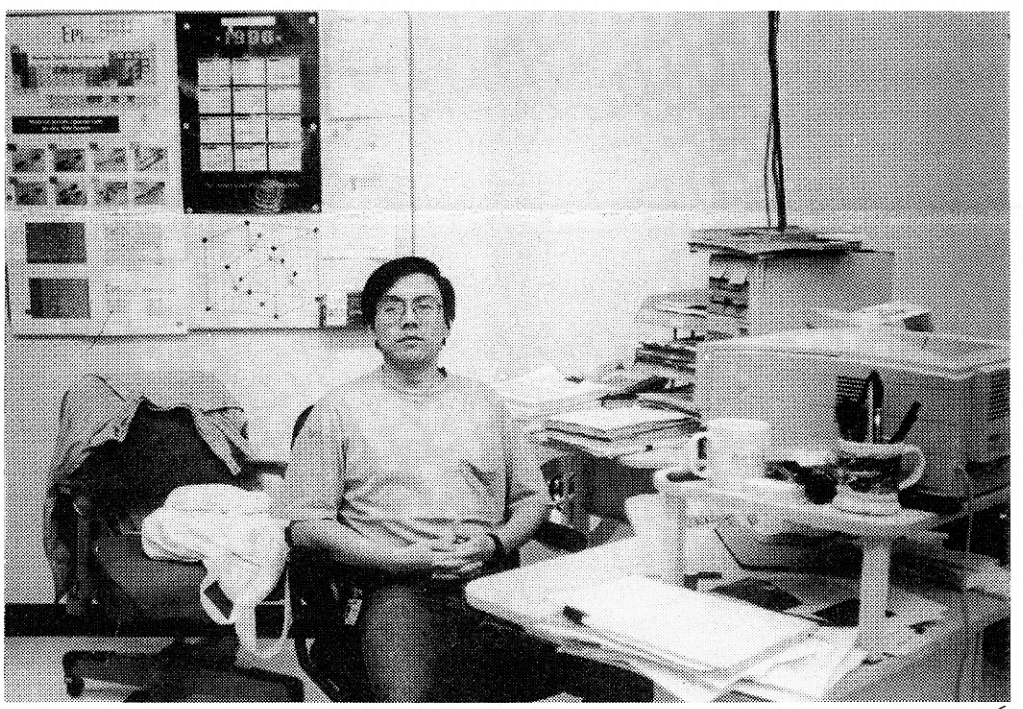
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1. Tom Cotter
2. Sarah Andrews
3. Rich Combes
4. Bob Kerr
5. Michael Gray
6. Tom Yang
(Photos by Joey Goddard, Lea McLees and Rick Robinson)

Volunteers *From page 1*

Lanier in June 1995 and will perform similar duties for the Olympics.

"I will work at the race start platform, keeping a stock of spare parts and tools for each team and supplying these to the crews as needed," he said.

His wife, Judy, who will also be working at Lake Lanier, is an Olympic veteran, having volunteered at the rowing venue during the 1984 Olympic Games in Los Angeles, Calif.

Volunteers must be willing to work 12 to 14 eight-hour shifts during the two weeks of the Games, and they must be available for training sessions before the Games begin, Harris said. But most volunteers' commitment runs even deeper. **Chuck Chapman**, a research engineer in SDL, has volunteered since 1992, when he began doing data entry work for ACOG. And **Sarah Andrews**, administrative coordinator for the Phosphor Technology Center of Excellence (PTCOE), has worked in the public information area of the Olympic Experience booth at Underground Atlanta for 4 1/2 years.

Andrews' volunteer experience does not end with the Olympics. She is an active volunteer in many other organizations such as Habitat for Humanity, Hands on Atlanta and the Festival of Trees.

"Like most people who volunteer, I have been blessed with a good family and life, and I wanted to give to others," said Andrews.

During the Games, Andrews will be acting as a host for the international Olympic family visitors.

Since he started working for ACOG, Chapman, who also donates his free time to Vencor Hospice Atlanta, has worked at Olympic souvenir carts, and most recently, helped with auditions for the thousands of performers who will appear in the opening and closing ceremonies.

"It was very exciting to meet and work with the group responsible for putting on other large shows, such as the opening and closing ceremonies in Barcelona and the Super Bowl halftime show here in Atlanta," he said.

Chapman will continue working with this group through the end of the Games, as well as providing cast support to the performers in the opening and closing ceremonies.

For others, the Olympics was a chance to get involved.

"This was a first for me," said **Tom Cotter**, mechanical designer in SDL. " I sent in the application on the spur of the moment, not expecting much. I was very excited when I found out I had been chosen."

Cotter will be driving members of the Olympic family from their hotels to various venues and sights around the city.

For their service, volunteers will receive meals during their shifts, a keepsake uniform and a volunteer lapel pin. They also will be recognized by name in the final report on the Games, and will be invited to attend the final dress rehearsal of the opening ceremonies.

But Harris notes that most volunteers participate for the intangible rewards.

"People want to volunteer because this is a once in a lifetime event that they want to be a part of," she said.

Combes agrees.

"I just wanted to contribute to Atlanta's effort for staging a successful Olympics," he says.

If you are interested in becoming an Olympics volunteer, some positions are still available. You may call the volunteer hotline at 404-548-2200 to request an application.

News & Notes

Service Awards Presented

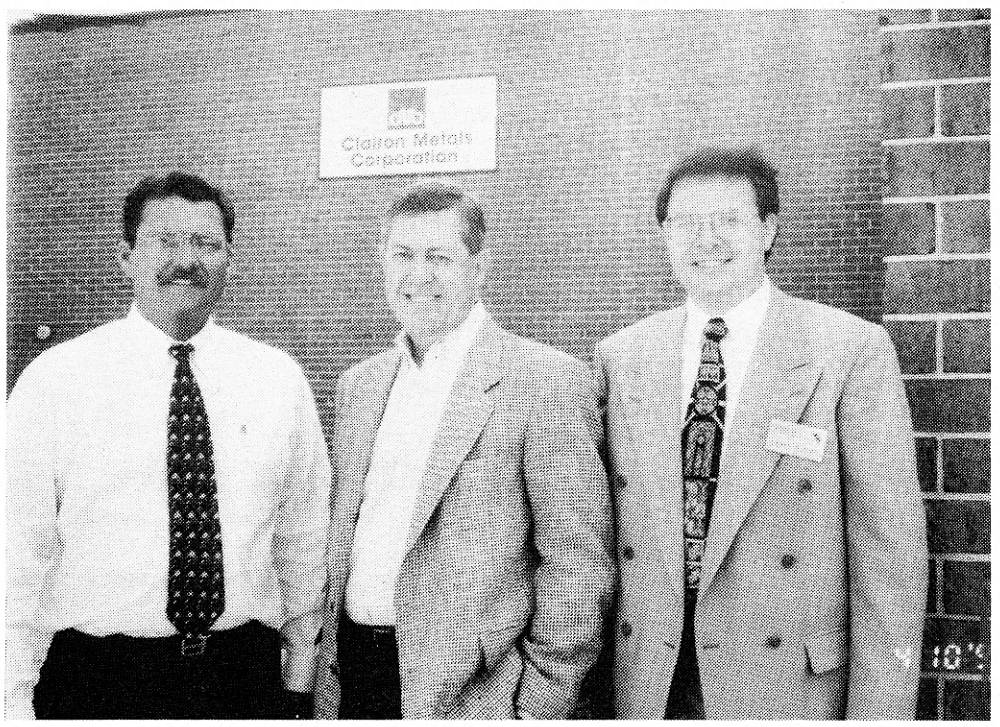
Congratulations and thank you to these GTRI employees for their service to Georgia Tech!

25 Years of Service

Name	Unit
Carl Baxter	SSD
Gene Greneker	SEAL

10 Years of Service

Name	Unit
Michael Cooper	ELSYS
John Doss	ELSYS
Adrienne Harrington	ELSYS
Richard Carey	EOEML
Michael Cathcart	EOEML
Allen Garrison	EOEML
Gary Gimmestad	EOEML
Nile Hartman	EOEML
W. J. Lackey	EOEML
Matthew Malok	EOEML
Margaret Ann Ojala	EOEML
Tracy Woods	FSD
Vernessia Callahan	ITL
Richard Odom	APO
Wilbert Stewart	RSD
Forest Williams	RSD
Dinal Andreasen	SDL
Jeffrey Sitterle	SDL
Louis Haller	SEAL
James Hampton	SEAL
Samuel Piper	SEAL
Lynette Powell	SEAL
Frank Sawyer	SEAL
Kenny Cupp	SSD
Brian Hanlon	SSD
Arthur Parker	SSD
Beverly Cooks	STL
Brian Shirley	STL
Donald Stevens	STL



Congressman John Linder, center, visited Clairon Metals, Inc. in Covington during April. Pictured with him are Clairon president Drew Link, left, and manager of the EDI's Clayton County Regional Office Larry Alford. (Photo courtesy Ray Moore)

Congressman Visits Industries Helped by EDI

Georgia Tech's Economic Development Institute (EDI) was in the spotlight during Congressman John Linder's (R-Ga.) April 10 visit to Covington.

Linder visited Bard Urological Division and Clarion Metals, Inc., both of which have benefitted from EDI's assistance. He met with leaders of successful manufacturing operations and listened to suggestions about problems and solutions — especially solutions provided by EDI.

Tech engineers helped Bard, which employs more than 500 people in Covington, expand its silicone catheter line. Bard makes medical devices that also include stents and specially packaged medical procedure kits. Chris Downing of the Griffin field office led a team that demonstrated a computer simulation tool. The team developed a software model permitting Bard to evaluate several options on the computer before selecting the most effective for installation. Bard engineer Mike Fowler now uses the computer simulation to analyze the catheter line and other manufacturing improvements.

Clairon Metals, which employs 67 people and a lean management staff, specializes in metal stampings, finishing, fabrication and assembly, tool and die engineering and computer assisted design/manufacturing. Tech engineers are developing a layout change that makes room for 11 new presses without requiring new construction. They also are helping the company meet national quality standards that will enhance Clairon's competitiveness, and are structuring a long-range growth plan targeting new markets and customers. This work is intended to bring new jobs to the region.

Georgia's small and mid-size manufacturers create new jobs and make money for their workers and stockholders. More than 9,000 small companies provide work for half a million Georgians.

EDI has 18 regional offices across Georgia, serving about 1,300 Georgia companies each year. Thanks to new funding from federal, state and private sources, much of that short-term technical assistance is at no cost to small and mid-sized companies. EDI helps communities attract new industry and expand existing operations, performs feasibility studies, introduces manufacturers to high-tech tools to make them more competitive, and incubates start-up high-tech companies.

Georgia Tech Makes Computing History with Million Dollar Addition to Its Virtual Parallel Supercomputer

By Toni Lynn Mills, OIT

The Office of Information Technology (OIT) soon will be home to Silicon Graphics' new $1.5 million POWER CHALLENGE (TM) 10000 featuring 22 processors, thanks in part to Silicon Graphics. Installed in April, it is the largest POWER CHALLENGE 10000 operating at a university or research facility.

The high performance shared memory parallel system will offer Georgia Tech researchers twice the performance of its predecessor.

The POWER CHALLENGE (TM) system is based on the MIPS(R) R8000(R) processor.

Designed specifically for optimal performance on real applications, the MIPS R10000 (TM) microprocessor raises performance levels through its innovative architecture, says Willy Shih, director of marketing for Silicon Graphics' Advanced Systems Division.

"Aggressive implementation of multiple execution units enables the processor's record-setting performance, delivering the highest operating efficiency and breaking many of the bottlenecks that hinder conventional processors," he added.

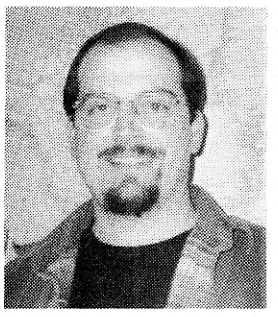
The high performance system is part of Georgia Tech's and OIT's effort to develop a "virtual parallel supercomputer" across the Tech campus. The system will be a great campus resource, allowing OIT to expand its campus-wide parallel computing effort, says Mary Trauner, OIT's educational technologies senior research scientist.

"With the advent of FutureNet and HPCNet, an OIT developed ATM (Asynchronous Transfer Mode) network dedicated to high performance and distributed parallel computing, existing and future machines can be integrated allowing researchers to run large programs across multiple machines effectively using existing facilities," she explained.

FutureNet is a Tech project aimed at expanding the Institute's high speed campus network, providing high bandwidth connectivity (10MB - 155MB) to the Tech community, including its 6,000 residence hall beds.

Tech researchers have studied high performance parallel and distributed computing for many years, in disciplinary areas such as finite element modeling, fluid flow, or simulation methods, and in required computer science technologies, such as parallel and distributed architectures, operating systems, and communication protocols.

Sandra Lashmit



Jim Suggs

Sharon Sullivan

GTRI Greetings

Welcome to some of our newest employees!

Ten Good Things We Know About Sandra Lashmit

1. Sandra is a Data Entry Clerk II in the Supply Services Division.

2. She is responsible for typing all the supply orders made by GTRI.

3. Nine years ago, she spent three years working in the Research Security Department (RSD).

4. Her husband, Carl, works for Landscape Services in the Plant Operations Division. He grows and plants flowers on campus.

5. Sandra grew up in New Jersey, where she graduated from high school.

6. Before moving to Atlanta, she lived in Hawaii for six years.

7. She and Carl live in College Park with their cats, Kitty-Lee and Graybar.

8. Before she joined GTRI, Sandra did general office work for a realtor.

9. Sandra is a long time member of her church, Peniel Worship Center.

10. In her spare time, she likes to grow African violets, garden and bake. She and her husband also collect model trains.

Ten Good Things We Know About Jim Suggs

1. Jim is a Research Scientist I in the Optoelectronic and Chemical Sciences division of EOEML.

2. He designs chemical sensors using a planar waveguide inferometer.

3. Known as the "sultan of substrates," Jim is responsible for keeping track of all the substrates used in the lab.

4. He graduated from Harvey Mudd College in Claremont, Calif., with a bachelor of science degree in chemistry.

5. He also has a master's degree in chemistry from the University of Illinois.

6. Jim grew up in Palm Desert, Calif., but moved to Atlanta to be with his girlfriend, Sue, a Tech graduate student in chemistry.

7. The two just bought a house together in Locust Grove.

8. While in school, Jim worked as a shoe salesman. "I still shudder at the sight of feet," he says.

9. His hobbies include cooking and brewing his own beer.

10. When he's not working, Jim enjoys hiking, backpacking and playing softball. He's the left fielder for the Department of Chemistry's softball team.

Ten Good Things We Know About Sharon Sullivan

1. Sharon started working for GTRI in December 1995 as a Research Engineer I in the Electronic Systems Laboratory (ELSYS).

2. A software developer, Sharon works mainly on support stations for aircraft systems.

3. She has a bachelor's degree in electrical engineering from General Motors Institute (GMI) in Flint, Mich.

4. While in college, she was a reporter for the university's newspaper, *The Technician.*

5. She earned a master's degree in electrical engineering from Washington University in St. Louis, Mo.

6. Before coming to GTRI, she worked at McDonnell Douglas for three years and then at Bell Northern Research for two years.

7. Her sister, Cyndy, has a mechanical engineering degree from Tech.

8. Sharon, who is single, lives in Roswell with her mini dachshund, Schnitz.

9. A sports enthusiast, Sharon enjoys cycling, running and swimming.

10. In her spare time, she also teaches aerobics.

Shiftlett, Reese and Roberts Recognized for Outstanding Performance

Frances Shiftlett (MAPS), **DeeAnn Reese** (Supply Services) and **Rusty Roberts** (SDL) will be honored at the Annual Faculty/Staff Honors Luncheon on May 23 for their excellent work at Georgia Tech.

Shiftlett, a project support analyst, and Reese, an administrative supervisor, each received a 1996 Faculty Research Award for Outstanding Research Support Personnel Performance, along with $1,000. This means that GTRI employees will take home two of the five research support personnel awards presented this year on campus.

Roberts, a senior research engineer, will receive the 1996 Faculty Research Award for Outstanding Achievement in Research Program Development, along with a $1,000 award and $4,000 to support his research.

Congratulations to Frances, DeeAnn and Rusty, and thanks to you from GTRI for all your great work and dedication!

The following colleagues across campus also will be honored on May 23 with 1996 Institute Awards:

Distinguished Professor Award:
Ajeet Rohatgi (School of ECE) -- $15,000 and plaque provided by the Class of 1934.

W. Roane Beard Outstanding Teacher Award:
Pradeep K. Agrawal (School of Chemical Engineering) -- $5,000 and plaque provided by the Class of 1940.

W. Howard Ector Outstanding Teacher Award:
Kurt C. Gramoll (School of Aerospace Engineering) -- $5,000 and plaque provided by the Class of 1940.

Outstanding Interdisciplinary Activities Award:
A. S. Abhiraman (School of Chemical Engineering) -- $5,000 and plaque provided by the Class of 1934.

Outstanding Service Award:
Evans M. Harrell (School of Mathematics) -- $5,000 and plaque provided by the Office of the Executive Vice-President.

Outstanding Continuing Education Award:
William R. Callen (School of ECE) -- $2,000 and plaque provided by the Department of Continuing Education.

Robotics

From page 4

"They must devise a system that will identify random objects from a stable, autonomous aerial platform, find a disk in an unknown location and retrieve it," he said.

The competition has been featured in numerous scientific and popular publications, as well as on the "Scientific American Frontiers" and "Discovery" television shows. Popularity of the event has grown exponentially every year, with teams from Europe, Asia and the Americas applying to compete.

Focus on Folks

Bob Cassanova, right, presents a photograph of the Tech campus to Coca-Cola's Bill Newton, vice president, corporate services. Newton helped arrange for Cassanova, an accomplished photographer, to shoot the photo from the top of the Coke building on North Avenue. The photo will be used in publicity for GTRI's Olympics-related research projects. (Photo by Lea McLees)

Focus on Folks

The *GTRI* Connector
Vol. 12 No. 7 May 1996

Published by the Research Communications Office, Centennial Research Building, Georgia Institute of Technology, Atlanta, GA 30332. Georgia Tech is a unit of the University System of Georgia. The deadline for submitting copy is the first Tuesday of each month.

Editor
Lea McLees, RCT
894-4259

Graphic Design
Charlotte Doughty, RCT
894-6965

Editorial Review
Charles Brown, RSF
894-3516

Associate Editors
Miriam Crenshaw, ERB
894-3523
Ann Dunehew, ELSYS
894-3592
Carey Floyd, Cobb 1
528-7070
Delora Gould, SSD
894-3408
Maggi Harrison, Cobb 2
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Janice Porter, VPDIR
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528-7915
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528-7808
Gail Tucker, RSF
894-3500

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Professional Activities

Electro-Optics, Environment and Materials Laboratory

Gary Gimmestad presented a talk entitled "The Georgia Automated Adverse Visibility Warning and Control System" at the Symposium on Night Visibility and Driver Behavior April 28-30 in Iowa City, Iowa. Co-authors were **Richard Carey**, **Wayne Daley**, **Ed Patterson**, **Bruce Harvey** (ITL), **Mike Kelly** (ELSYS) and **Pete Parsonson** (School of Civil and Environmental Engineering). The symposium is organized by the Transportation Research Board of the National Research Council.

Steve Hays was a guest lecturer on "Safety & OSHA" in the Engineering in Practice graduate course in the College of Engineering at Mercer University's Atlanta campus on April 22.

Paul Middendorf is a volunteer coach for Berkmar High School's Odyssey of the Mind team (a creative problem-solving competition) in "OmVention." The team had to invent a device to help a handicapped person and develop an 8-minute skit to showcase the device. The team won their regional competition in March, and placed second in the state tournament on April 20.

At the invitation of Anita Jones, Director of Defense Research and Engineering, **Henry Paris** recently served as one of five members of the Technology Area Review and Assessment (TARA) team, Department of Defense (DoD) Materials/Processes Science and Technology (MPS&T) Program. The April 17-19 review covered the complete science and technology program in civil engineering and environmental quality. The TARA team assesses quality and ensures the program meets the technology objectives of the DoD's Joint Warfighting Science and Technology/Defense Technology plans.

Claudia Huff moderated a panel discussion, "Curriculum in Higher Education," as part of the "Education, Training and Learning" track at the Spring Conference of the National Pollution Prevention Roundtable, held April 9-12 in Washington, D.C.

In April, **Shane McWhorter** presented a paper at the SPIE Aerospace Defense Sensing and Controls Symposium in Orlando, Fla. "Target Recognition Based on a Computational Vision Model" was co-authored by **Ted Doll**, **Dave Schmieder** and **Kathy Schlag**.

A poster titled "Evaluation of Laminated Matrix Composites" won Best of Show in the American Ceramic Society's ceramographic contest held April 14 at Society's Annual Meeting in Indianapolis. The poster described Jack Lackey's exploration of methods to improve the mechanical properties and lower the costs of ceramic matrix composites.

In November 1995 the Phosphor Technology Center of Excellence organized the First International Conference on the Science and Technology of Display Phosphors in San Diego, Calif. The chairman of the meeting was **Chris Summers**, and **Brent Wagner** and **Stuart Jacobsen** served on the organizing committee. Stuart Jacobsen gave an invited talk on "Phosphors for Full-Color Low-Voltage FEDs." **Christian Stoffers** presented "Saturation of Phosphors Under Low Voltage Excitation" (co-authors: **S. Yang**, **S. M. Jacobsen**, and **C. J. Summers**). **Fuli Zhang** discussed "Optical Properties and Optimizing Parameters of FED Phosphor Screens" (co-authors: **S. Yang**, **J. A. Cooper**, **S. M. Jacobsen**, and **C. J. Summers**). **Wounjhang Park** presented "High-quality ZnS Thin Film Growth for Flat Panel Display" (co-authors: **W. Tong**, **T. K. Tran**, **B. K. Wagner**, and **C. J. Summers**). **Tao Yang** discussed "MBE Growth and Characterization of SrGa2S4:Ce Blue Phosphor for Thin Film Electroluminescence" (co-authors: **M. Chaichimansour**, **W. Park**, **B. K. Wagner**, and **C. J. Summers**).

Signatures Technology Laboratory

Eric Kuster, **Lisa Lust**, **Paul Kemper** and **Rick Moore** participated in the March 1996 American Physical Society meeting in St. Louis by presenting two papers in percolation theory and material properties.

Advanced Programs Office

Jennie Lincoln was an invited participant in the Latin American Strategy Symposium co-hosted by the U.S. Southern Command and the National Defense University, April 24-26 in Miami, Fla. The symposium brought together military officials, civilian leaders and academics representing 29 nations in the hemisphere to address regional security issues.

Personnel News

New Hires

SDL welcomes **Casey Brown**, RE I; **David Kuechenmeister**, RE II; and **Mark Juliano**, RA I. AERO welcomes **Alanna Albrecht**, RS I; **Michael D'Agostino**, Student Assistant; **Yi Ding**, RE I; and **Dominic Nguyen**, Student Temp. ITL welcomes **Brian Barnes**, RE I; **Cynthia Davis**, Student Temp; **Janis Roberts**, RS II; and **Johnny Smith**, RS II. ELSYS welcomes **Bryan Bassett**, Student Temp; and **Kirk Bauer**, Student Temp. EOEML welcomes **Todd Deterding**, RS I; **Matthew Dobbs**, Student Temp; **Edgar Estupinan**, GRA; **Jeffrey Moore**, Grad. Teaching Assistant; and **Charles Rucker**, PRE. MAPS welcomes **Janice Dietz**, Admin. Asst. I. AIST welcomes **Jason Harlow**, Student Assistant. SEAL welcomes **Michael Kastle**, RE II; **Jeff Kemp**, RE I; **Stephen Kulik**, Student Temp; **Thomas Logan**, GRA; and **Donald Sherman**, RE I. APO welcomes **Julie Wilson**, Student Assistant.

Moving On

John Butler (AIST); **Mark Caldarello**, **Dane Chin Loy**, **Derek Cook**, **Robert Foster** and **Steven Ritchie** (ITL); **Todd Elsbernd**, **Alexander Fleming** and **Eugenia Smith** (AERO); **Michael Gross**, **Marc Pyne** and **Princess Simpson** (EOEML); **Catherine Hinton**, **H. Johnson**, **Hong Man**, **Jerry Sexton** and **Tracey White** (SEAL); **Jay Katz**, **Steven Klivansky**, and **Jeffrey Miller** (ELSYS); **Steven Marc** (SDL), and **Mandy Schreiber** (SDL); **Jeanique Riche** (MAPS); and **Cheri Wiesman** (APO) are moving on.

Personal Notes

Cradle Roll

Karen & **Mike Heiges** (AERO) welcomed a son, Thomas Lee, on March 19.

Myris and **Patrick Dowdy** (RO) and their son, J'Len, welcomed a daughter and sister, Kiana Arriel, on April 13.

Our Sympathy

...to **Mark Strikland** (HRO), whose father died April 22.

...to **M. Wayne Miller Jr.** (HRO), whose mother-in-law died April 17.

Kudos

Donna (Civil Eng.) and **Tom Brown's** (AIST) daughter, Laura, pitched a winning last game for the Georgia Tech Women's Fast Pitch Softball team on April 23. The Division I team beat Georgia Southern's Lady Eagles 8-1. A four-year starter and fast-pitch softball player since she was 8, Laura has a Georgia Tech career record of 26 wins 18 losses, including an impressive 11 wins and four losses her junior year. Laura, who worked for GTRI one summer doing computer programming in the Baker Building, will graduate in 1997 with a degree in management.