

The GTRI Connector

Get Ready to Picnic!

The Spring Fling Picnic is scheduled for 11 a.m. to 2 p.m. June 9 at the Burger Bowl. GTRI and EDI employees will enjoy food, games, prizes and music from Star 94 FM. Rain date is June 9. Look for fliers arriving in campus mail, and be sure to RSVP to DW Senn, Room 223 CRB, Mail Code 0828 by June 1.

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Initiative Funded, Will Assist Georgia's Food Processing Industry

GTRI is playing a lead role in a new statewide initiative to assist the state's food processing industry. The initiative was organized last summer by the Governor's Economic Development Council.

A Food Processing Coordinating Committee (FPCC) was established, made up of members of the University System of Georgia, state agencies, the public services community, and the food processing industry. This committee developed a report and proposal addressing ways to strengthen Georgia's food processing competitiveness.

The proposal was successfully used by Gov. Zell Miller to secure funds in the 1994 legislative session totaling \$1.69 million for FY95. The funds will be used to initiate education, outreach, and research activities supporting this important industrial sector, said Craig Wyvill (EOEML), director of GTRI's Agricultural Technology Research Program.

"We are attempting to establish an infrastructure that improves the delivery of research and services focused on the key needs of the food industry here in Georgia," said Wyvill, also chairman of the FPCC Process and Products Competitiveness Technical Subcommittee. "While outreach receives top billing in activities planned for the coming year, research is clearly the big winner."

More than 80 percent of the FY 95 funds approved were targeted for equipment purchases and facilities upgrades that

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Wayne Cassaday (SDL) accepts the 1994 Young Radar Engineer of the Year award from Dale Ausherman, IEEE Radar Systems Panel, during the National Radar Conference Banquet on March 29. (Photo by Dayton Funk)

Cassaday Named 1994 Young Radar Engineer of the Year

By Lea McLees, RCT

A GTRI employee is the recipient of a top honor from the radar systems panel of the Institute of Electrical and Electronics Engineers' Aerospace and Electronics Systems Society (IEEE/AESS).

Wayne Cassaday (SDL) was named the 1994 Young Radar Engineer of the Year during the IEEE National Radar Conference banquet on March 29 in Atlanta.

"I'm really quite humbled by the award," Cassaday said. "Obviously it's a

great honor and I hope it brings some positive recognition to Georgia Tech. It is special to me to be given the award at this radar conference, since it is being held in Atlanta and I am the program chairman."

Cassaday, a senior research engineer, is chief of SDL's Radar, Physics and Instrumentation Division and has worked at GTRI for five years. He earned a bachelor's degree in electrical engineering from Clemson and a master's in electrical engineering from Georgia Tech. He is the first GTRI employee to receive this international honor since it was first awarded 10 years ago.

Recipients must be IEEE members at any grade level in the AESS, and can be no more than 40 years old. The award grants "international recognition for outstanding contributions to the radar art" to

Continued on page 7

Observed & Noted

"Brown Bag with the Boss" Set for June

GTRI employees are invited to attend Brown Bag with the Boss, a series of informal town hall discussions in June with Richard Truly.

Five lunchtime meetings are set:

- June 9 in CRB auditorium for CRB Building employees;
- June 23 in CRB auditorium for Baker Building employees;
- June 24 in Cobb County Research Facility auditorium for Building 1, 2 and 3 employees;

•June 28 in CCRF auditorium for Building 4 and 5 employees; and

•June 29 in CRB auditorium for O'Keefe, ERB and other GTRI building employees.

The meetings will run from noon to 1 p.m., with Truly making brief introductory comments before the open discussion period. Participants are invited to bring questions, comments and lunch.

To reduce the chances of overcrowding, suggested attendees for each meeting have been designated by building. However, GTRI employees are welcome to attend any alternate sessions.

Need to send campus mail to a GTRI colleague? You can clip and save the list of GTRI's new mail codes on page 3.

Equitech findings are now being applied around campus. For answers to basic questions, see page 3.

GTRI employees are encouraging interest in science and math among children and college students. See pages 4 and 5.

The back page is overflowing with professional and personal news. Allow some extra time to read page 8.

**News
&
Notes**



Orville Smith



Nantambu Ambidwile



Teddy Reed



James Mason



Danny Williams

**Meet the Mail
Distribution
Team**

Next time you visit your mailbox and find it brimming with envelopes, you can thank GTRI's Mail Distribution Team (MDT). MDT has metered and delivered more than 700,000 pieces of mail in the last nine months.

GTRI's mail clerks/carriers make four deliveries daily to each of more than 70 mail drops at GTRI and nearby at the Office of Contract Administration, the Advanced Technology Development Center, and WREK. Correctly addressed mail picked up on the first morning mail run is usually delivered to its destination within GTRI that afternoon.

Other MDT responsibilities include figuring postage rates for overseas mail, processing large packages, delivering "green sheets," paychecks, and publications, taking classified mail to the Georgia Tech Post Office, and processing United Parcel Service, Federal Express, and other specially delivered mail at CCRF. The team's biggest challenge is scheduling themselves to frequently cover increasing numbers of mail drops.

GTRI's new mail codes (see list, page 3) should allow for precise sorting and faster delivery, team members say. They are interested in hearing your sugges-

tions. Read on for more information about MDT members — and tell your carrier hello the next time you see him!

Orville Smith

Has worked at GTRI for 14 years, always as a mail clerk. He is the team member who makes sure that classified mail is delivered safely to the Georgia Tech Post Office after Research Security has prepared and processed it. After work, he likes going out with friends.

Nantambu Ambidwile

Has worked at GTRI for five years as a mail clerk. He drives the Cobb County shuttle, taking mail there each day. He also tries to keep stamps handy on his rounds, in case people need them for personal mail. The new mail codes will make delivery at GTRI more efficient, he says. After work at GTRI he heads to an evening job as a security guard, and he also is very active in his church.

Teddy Reed

Has worked at GTRI for 19 years, always in mail distribution and currently as the MDT supervisor. He reminds everyone to stamp mail properly to ensure prompt delivery, no matter what class it is — first, bulk or otherwise. Employees who change offices can avoid mail delays by letting Reed know. After work, he zips off to an evening job cleaning offices.

James Mason

Will have worked as a GTRI mail clerk for

13 years as of July 1. He delivers mail mainly in CRB, and encourages everyone to use the expanded GTRI mail codes — especially on bulk mailings. After work he enjoys watching high school, college and professional basketball, football and baseball. He has read the city's newspaper cover-to-cover seven days a week for the past 20 years.

Danny Williams

Has worked as a GTRI mail clerk for almost two years. Says the best-addressed internal mail includes recipient's name, department/room number/building and mail code. Even if internal mail is addressed incorrectly, he says team members work to get it to the right place. After work he does volunteer work with Cascade Road EYC's Youth Program and is studying Spanish, Korean and Japanese.

Larry Respress

Has worked as a GTRI mail clerk for 14 years. His responsibilities include mail delivery at CCRF, picking up CCRF mail at the Smyrna Post Office, and handling packages sent by United Parcel Service, Federal Express and Airborne. If you plan to send a package from campus to CCRF but end up not sending it on the anticipated date, he asks that you let the CCRF person expecting the package know. After work he heads to evening jobs. We wanted to include a photo of Larry, but he prefers not to have his picture taken.

SELECTED MARCH 1994 AWARDS

Title	PI/Laboratory	Sponsor	Funded Amount
Universal Drone Control System for H-3 Helicopter	Stancil, C. (AERO)	Air Force	\$ 130,000
Integrated Electronic Combat Threat Response Matrix Develop.	Wright, G. (ELSYS)	Air Force	200,000
RCU Fabrication	Evans, L. (ELSYS)	Martin Marietta Corp.	48,757
"Capped" Colloidal Quantum-Dot Semiconductor Particles W/Monomer...	Schwerzel, R. (EOEML)	Navy	97,489
Sintered Silicon Nitride Composites	Starr, T. (EOEML)	Oak Ridge National Lab.	123,900
Phosphor Technology Center of Excellence	Summers, C. (EOEML)	U.S. Department of Defense	2,000,000
Missile Seeker Manufacturing Engineering	Bullard, B. (HRO)	Army	99,903
TOW/COBRA Flir Missile Tracker (FMT) Firmware Development	Dowdy, P. (HRO)	Army	15,340
Transceiver Susceptibility Analysis	Moss, R. (ITL)	Army	100,000
Intelligence Analysis Center Integration & Training	Atha, J. (ITL)	Army	59,931
Evolving to ISDN - FY 94	Evans, J. (ITL)	Army	180,869
Instrumentation & Experimental Testing	Moss, R. (ITL)	Army	310,340
TAS Radar	Roberts, R. (SDL)	U.S. Department of Defense	395,984
Additional 94 GHz System Support	Moore, L. (SDL)	Lockheed - Fort Worth	79,250
Development & Analysis of Innovative MMW Smoke Materials	Perry B. (SEAL)	Army	150,000
Task Implementation Plan for TAG 32-01	Cotton, J. (SEAL)	McDonnell Douglas Corp.	291,509
Antenna Measurements for Rockwell	Cotton, R. (SEAL)	Rockwell International	25,000
SOF E3 Program - FY 94/95	Millard, D. (SEAL)	Air Force	750,000
Electromagnetic Environmental Generating System	Clark, D. (SEAL)	Navy	400,000
Radar ECCM Flight Test Demonstration and Vulnerability Assessment Program	Morris, G. (SEAL)	Air Force	100,000
Battle Field Environment & Performance Simulator	Saffold, J. (SEAL)	Army	425,000
Teris System Engineering & Installation Support	Adams, J. (SEAL)	Army	121,000

News & Notes

NEW MAIL CODES FINALIZED

Following is the list of the new GTRI mail codes announced in last month's CONNECTOR. The count, or numbers of people getting mail at each code, may change from time to time. To ensure the most up-to-date count possible for your mailings, you may call Harry Vann at 894-7320.

Code	Unit	Bldg./Floor	Count
0801	VPDIR	CRB	18
0802	SSD	CRB	6
0803	SSD-SST	GTRI/WHS	7
0804	SSD-RPT	AREA II, 49B	6
0805	SSD-FST	Baker	8
0806	FSD	AREA II, 49C	11
0807	PST	COL ANNX	8
0808	SSD-SST	COL ANNX	9
0809	RSD	CRB	11
0810	RSD	O'Keefe	1
0811	RSD	Baker	1
0812	RSD	ERB	1

0813	MAPS	Baker	5
0814	MAPS	CRB-5	4
0815	ROAM	CRB	4
0816	MAPS	CRB-3	25
0817	MAPS	ERB	4
0818	SSD-MST	GTRF/CC	4
0819	SSD-MST	Hinman	6
0820	EOEML	Emerson	7
0821	ITL	ERB	37
0822	SEAL	ERB-2	20
0823	EOEML	MARC	18
0824	STL	CRB-5	46
0825	EOEML-OETB	Baker	14
0826	EOEML-MSTB	Baker-1	18
0827	EOEML-MSTB	Baker-2	12
0828	RCT	CRB	6
0829	ELSYS	CRB-4	76
0830	ELSYS	CRB-5	26
0831	ITL	MARC	2
0832	ITL	ERB	47
0833	SEAL	ERB-1	7
0834	EOEML	Baker	74
0835	EDI-CISQ	O'Keefe	2
0836	EDI-OPS	O'Keefe	4
0837	EOEML	O'Keefe	56
0838	PDO	CRB	9
0839	EDI	O'Keefe	92
0840	ELSYS	CRB-6	51
0841	SSD-ICT	ERB	1
0842	HRO	Huntsville	34
0843	SSD-CC	GTRF/CC	12
0844	AERO	GTRF/CC-2	50
0845	MAPS	GTRF/CC-5	3
0846	SDL	GTRF/CC-4	11
0847	ELSYS	GTRF/CC	5
0849	SDL	GTRF/CC-5	9
0850	SSD-ICT	GTRF/CC	2
0851	SEAL-OD	GTRF/CC-5	2
0852	SEAL	GTRF/CC-4	30
0853	SDL	GTRF/CC-3	77
0854	RSD	GTRF/CC	3
0856	SEAL	GTRF/CC5-2	20
0857	SEAL-RSD	GTRF/CC5-1	37
0858	SEAL	GTRF/CC3	16
0859	SEAL-OD	GTRF/CC5	3
0860	AERO	GTRF/CC-1	2
0861	EOEML-QMB	Baker	31
0862	ARL	O'Keefe	30
0863	SSD-MDT	CRB	7
0864	MAPS	GTRF/CC1	3
0865	EOEML-PACB	Baker	9
0866	STL	CRB-6	12

EquiTech In Action Around Campus

By Lea McLees, RCT

Findings from EquiTech: The Job Study Project are being applied around campus as part of the 20-month study of Georgia Tech classified employees and their jobs.

Employees learned more about how the EquiTech study was done and what is next at April 13 and 18 meetings, one of them held at the Cobb County Research Facility. More than 1,000 employees attended, including at least 150 from GTRI.

EquiTech: The Job Study Project evaluated employee classifications and pay, defined career paths and jobs, and linked individual job performance to strategic objectives for 2,000 classified employees at Tech. The results of EquiTech are uniform job titles, grades and corresponding salary ranges. The salary ranges were set based on prevailing market conditions.

About 400 employees, 14 of them working at GTRI, will receive salary increases to bring their earnings within the ranges specified for their job grades. A total of \$800,000 has been set aside to make these adjustments, said Jerry Dark, associate vice president, Office of Human Resources.

Following are answers to questions employees raised at the April meetings:

•Where do the salary adjustment funds come from? The \$800,000 for salary adjustments comes from central funds, primarily from new workload allocation. In addition, the merit budget funds the FY 95 raises approved by the Georgia Legislature earlier this year. Those who receive EquiTech salary increases also are eligible for merit raises.

•Does EquiTech impose salary caps or cut pay? No. If you earn close to or above the maximum salary for



GTRI field office directors came to campus to meet with Ed Reedy (RO) and Don Wilmot (PDO) on April 5. From left, Reedy, Wilmot, Joe Harrison (Eglin), Dave Wyatt (Huntsville), Bill Vandermeer (Ft. Monmouth), Bob Mobley (Warner Robins), Dave Erickson (Dayton), Paul Seaton (Dayton consultant), Jim Allen (Arlington), and Ed Eagar (Arlington, Head, Test Management Support Branch). (Photo by Dayton Funk)

your job grade, you still are eligible for annual merit increases. The midpoint, minimum and maximum of salary ranges could be raised in the future, based on the market and Tech's ability to pay.

•Will the salary adjustments EquiTech mandates cost sponsored research programs? GTRI costs are fully reimbursed by our research sponsors. As a result, salary changes directly impact specific projects utilizing individuals who received EquiTech adjustments to bring their salaries to the minimums for their pay grades. Since the total for such adjustments involved only about \$10,000 for all of GTRI, there should be no major impact on any specific project's budget.

•What if I disagree with the salary range or title assigned for my job? Appeals will be handled May 1-10, and quarterly after that.

•What is the difference in reclassification and promotion? Reclassification, the re-naming of a job position, means that the job itself has changed. Reclassification is not based on individual performance. Promotion happens when a person moves up from one position to another, and would involve posting of the higher level position. Other EquiTech activities include:

•An evaluation of pay among classified employees by gender and race, is slated for FY95. If inequities are

found within job titles, adjustments will be made.

•Having set a procedure for employee performance appraisals. A new performance appraisal process has been developed. It includes employees meeting three times per year with their respective supervisors to set goals and track performance.

•Having developed a reconsideration process that employees and supervisors may use if an employee or supervisor does not agree with the classification.

Among the GTRI employees who worked with the EquiTech project were EquiTech Task Force members Pat O'Hare (RSF) and Carolyn Mahaffey (MAPS), and former GTRI employees Gayle Warren (EDI) and Lynn Burt (OHR). Director Richard Truly was a member of the Strategy Group, made up of selected deans, vice presidents and Board of Regents representatives.

Tech's Salary Administration Policy, described at the meeting, is document 4.1 in volume 4.0 of the Tech Human Resources Policies and Procedures Manual. If you do not have access to a manual and would like a copy of the policy, you may send e-mail to Eunice Glover at eunice.glover@gtri.gatech.edu.

Focus on GTRI's Future

Sophia Barsukova, developer of Russia radars, tells 28 students at Summerour Middle School about phased array antennas and working in the sciences in Russia. In Atlanta for the IEEE's National Radar Conference, she spent a morning with the students at the request of Martha Willis (SEAL) as a speaker for the Women in Science and Engineering (WISE) mentoring program. Barsukova was awarded Russia's highest medal of honor for her radar work. (Photo by Lea McLees)

Growing Future Colleagues in Science, Math and Engineering

By Lea McLees, RCT

Encouraging children who are interested in math, science and engineering — and then supporting them once they arrive on campus as freshmen — is obviously important to the academic schools and colleges on campus. But such activities are paramount to GTRI, as well.

About 33 percent of all permanent and active GTRI employees had earned one or more of their diplomas at Tech as of last spring, according to data from the Office of Human Resources. Each year's freshman class holds potential undergraduate co-op students, student assistants, graduate research assistants and full-time professional employees.

Following are examples of what some GTRI employees are doing to encourage and support future scientists and engineers. In addition, you'll find three related articles that spotlight specific programs you may want to participate in.

•Cobb County Research Facility employees **Jennie Tate** (RSD), **Mollie Gary** (SEAL), **Wayne Cassaday** (SDL), **Krish Ahuja** (AERO), and **Martha Willis** (SEAL) organized "Take Our Daughters to Work Day" (TODTW) for their location on April 28. Sponsored by the Ms. Foundation for Women, TODTW is a national public education program ensuring that girls are respected and taken seriously as potential job recruits (see related article and photo, page 5).

•Co-op **Linda Freeman** (SEAL), a member of the Society of Women Engineers, judges middle school science fairs and promotes science and engineering among children, particularly girls.

•**Martha Willis** (SEAL) helped organize

the Women in Science and Engineering (WISE) mentor program and participated in it (see related article and photo, this page). She also organized a program that will allow 10 teachers to come to GTRI this summer to plan helpful workshops for their colleagues on science, math and engineering-related subjects relevant to the classroom.

•**Jill Gostin** (SEAL) participated in WISE, as did **Myrtle Turner-Sippio** (EOEML). Turner-Sippio encourages junior high school students to explore their interests in science and technical subjects through Tech's Futurescape program, as well.

•**Ken Johnson, Kirk Mahan** and **Paul Schlumper** (EOEML) participate in a program that helps students become aware of the need to wear seatbelts.

•**Toni Hurley** (EOEML) assisted a child who wanted to do a science project on lead in drinking water.

•Working with science fairs is something **Rob Muzio** (SDL) enjoys — he also does scientific demonstrations for children that are related to subjects they are studying in school.

•A group of sixth graders at Pine Mountain Middle School got an introduction to lasers from **Dave Price** (SDL) recently.

•**Bob Schwerzel** (EOEML) also presents demonstrations that go over well with the elementary school set. He explains photochemistry and light and shows pretty fluorescent dyes and ultraviolet-induced color-change reactions.

•**Claudia Huff** (EOEML) was one of a team of Society for Technical Communication (STE) members recently judging entries in the International Science and Engineering Fair for a special award STE presents. The fair was held in Birmingham, Ala.

•**Kathy Schlag** (ELSYS) participates in Futurescape and judges local high school science fairs.

•**Gene Greneker** (SEAL) has helped students develop award-winning projects for school science fairs.

•**Craig Wyvill** (EOEML) and colleagues at the Agricultural Technology Research Program help teachers tell children about how science and math are used in the poultry industry. Sixteen teachers and two students from northeast Georgia Schools visited Georgia Tech on February 17 to find out how Georgia Tech supports the poultry industry using engineering. Their program is sponsored by Pioneer Regional Educational Services Agency.

•Several employees shared their research with Georgia Tech students during an open house for Tech students in February, and during another open house that month for female high school students. Among those who participated in one or both programs were **Nick Faust** (EOEML), **John Gilmore** (ITL), **Laurie Hodges** (EOEML), **Matt Langaman** (EOEML), **Ted Doll** (EOEML), **Mike Sinclair** (Tech's Multimedia Lab), **Roy Thompson** (ELSYS), **Ricky Moore** (STL), **Kathy Schlag** (ELSYS), and **Paul Wine** (EOEML).

•Among the GTRI employees who assisted with a recent bridge-building contest at SciTrek were **Rae Adams** (EOEML), **Ron Bohlander** (ITL), **Jim Clark** (EOEML), **Wiley Holcombe** (EOEML), **Claudia Huff** (EOEML), **Nancy Kelley** (EOEML), **Gary McMurray** (EOEML), and **Craig Wyvill** (EOEML).



GTRI Employee Organizes WISE Women at Georgia Tech

By Lea McLees, RCT

A program that links women in science and engineering careers with middle grades students was begun and led this year by a GTRI employee, working in conjunction with the College of Science's Center for Education Integrating Science, Mathematics and Computing (CEISMC).

Martha Willis (SEAL) planned the Women in Science and Engineering (WISE) mentor program as a way of pairing women in technical careers as mentors with classrooms around metro Atlanta. The mentors provided introductions to technical career opportunities for all students — and allowed girls to meet female role models in technical fields in person.

"Women and girls continue to be enrolled in education and training programs that prepare them for low-wage jobs in traditionally female occupations," Willis said. "WISE is an effort to empower girls, and enable them to visualize themselves as scientists and en-

gineers in tomorrow's work force."

A total of 39 women volunteered to be mentors for classrooms in Atlanta, Cobb, DeKalb, Fulton and Gwinnett schools, including eight women from Georgia Tech. Each visited the classroom as often as she could, leading the children in activities that showed real world applications for the math and science they were learning in school. Each mentor also had her classroom's teacher visit the mentor's work site, and went on a math- or science-related field trip with the class.

One mentor led her class in planning Olympic kiosks. Another helped a class design an ergonomically correct chair for President Bill Clinton, based on his measurements. Other activities included planting trees and visiting water treatment plants, environmental companies, and SciTrek.

WISE is sponsored by CEISMC and is affiliated with the Georgia Initiative for Mathematics and Science. The eight Georgia Tech employees who participated this year were Willis, Jill Gostin (SEAL), Jacqueline Bridge (ME), Ph.D. student Ellen Bass (IE), Carolyn Whitescarver (CRT), Lee Bottomley (COS), Melody Moore (COC), and Myrtle Turner-Sippio (EOEML).

If you are interested in participating in the WISE program during the next academic year, you may call CEISMC at 894-9544 for more information.

How Can We Help When They Get Here? The ASSET Program Wants You

By Lea McLees, RCT

Once students arrive on the Georgia Tech campus as freshmen, they need a personal link with the campus — just ask John Pyles (ITL). A Tech graduate himself, Pyles spends some of his free time each year as a Georgia Tech ASSET friend to six to 12 freshmen.

"I've been a student at Tech, and so I know that it involves a lot of work and pressure," he said. "A lot of the questions I answer are 'Who do I need to talk to about this?' 'Where do I find out about that?' And, 'How do I switch majors?'"

ASSET — Academic Support for Students Entering Tech — aims to improve Tech's retention, reception and appreciation of students, as well as the academic environment. It is one of several programs for first-year students on campus, including Challenge, Freshman Experience, Psychology 1010, Georgia Tech Liaisons for Incoming Students, and FASET, an orientation program.

Coordinated by the Center for the Enhancement of Teaching and Learning

CCRF Employees Take Their Daughters to Work

By Lea McLees, RCT, and Sarah Peery, guest writer

About 50 employees had some extra company on their April 28 drives to work at the Cobb County Research Facility (CCRF).

That extra company was their daughters. CCRF organized a "Take Our Daughters To Work Day" (TODTW) program as part of a national effort sponsored by the Ms. Foundation for Women. TODTW is a public education program that encourages firsthand exposure to the workplace so that girls are respected and taken seriously as potential job recruits. Last year nearly one million girls and their parents or mentors participated nationally.

The 46 visitors, ages 7 to 17, toured the Naval Air Station (NAS) near CCRF and

(CETL), ASSET links a Georgia Tech employee with a Tech upperclassman and about 10 Tech freshman. The employee and the upperclassman help the freshmen in their group and organize activities for them, especially during the first quarter of each academic year.

"The retention literature stresses the need for adult involvement with first-year students, especially during the first six weeks of college," said Billiee Pendleton-Parker, ASSET co-director with David J. McGill. "It is within that time frame that dropout decisions are usually made."

About 60 percent of the ASSET Friends are teaching faculty, and the rest are administrators, staff, and GTRI employees, like Chris Downing (EOEML).

"I try to give the students a perspective on GTRI's relationship to Georgia Tech, and tell them about the opportunities as co-op students and student assistants here," he said. "It's so important for them to get off to a good start. I like to see their energy and excitement."

ASSET groups tend to plan more activities in the fall, tapering off in the winter and spring — depending on the needs of the students involved. The Georgia Tech Foundation is making money available so that each ASSET friend has about \$200 to spend on activities with her or his group during

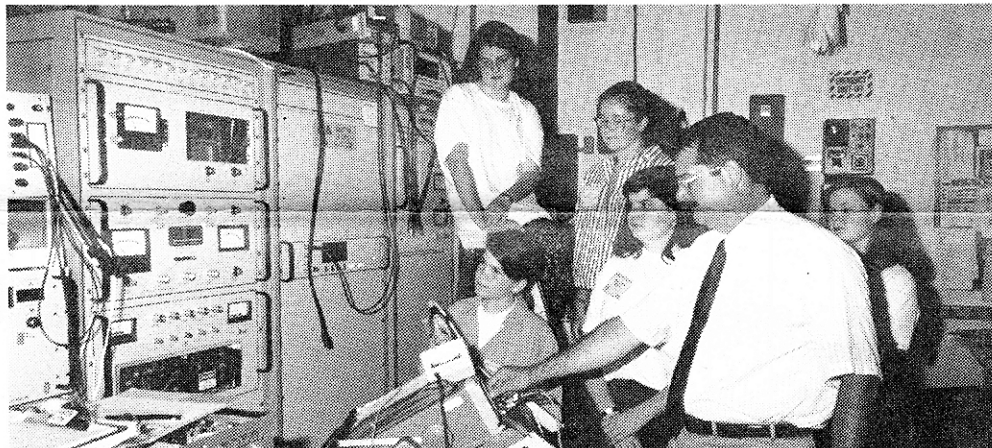
1994-95, ASSET's third year. All activities do not have to cost money, though, Pendleton-Parker said — ASSET groups can meet for lunch in the dining hall, or throw Frisbees in Piedmont Park.

"The activities provide first-year students innumerable opportunities to have questions answered and concerns addressed," Pendleton-Parker said. "Even if the ASSET friend can't answer the question, he or she can tell the student who on campus can."

If you are interested in becoming an ASSET friend or finding out more about the program, you may call Pendleton-Parker at 894-8898, send e-mail to bp4@prism.gatech.edu, or clip the form below and mail to ASSET/CETL, Mail Code 0383. Please respond by May 31. A two-hour training session for ASSET Friends followed by a reception is planned for 3 to 5 p.m. June 1, in the Bill Moore Student Success Center's Clary Theatre.

YES, I'm interested in becoming an ASSET friend or getting more information:

Name _____
Campus Address/Mail _____
Code _____
Phone _____
Fax _____
E-Mail _____



spent an hour on the job with their parents. Lunch was provided by CCRF lab directors Bob Cassanova (AERO), Joe Parks (SDL) and Bob Trebits (SEAL). Barbara Walsh (FSD) officially welcomed the visitors and their parents, and Bob Lang (RSD), chairman of the Olympic Village Security Committee, discussed Georgia Tech's involvement with the 1996 Olympics. Afterward the students toured both the acoustics and radar facilities at CCRF.

Several of the visitors — all of whom enjoyed their visits and want to come back next year — were especially interested in careers in aviation. "It would be cool to be one of the public affairs people who goes to all the air shows," said Emily Gary, 12, daughter of Molly Gary (SEAL).

David Price's (SDL) daughter Beth, 14, wants to fly some of the planes she saw at NAS, such as the A-6. "There are almost

Continued on page 7

Employees Play Important Roles in IEEE National Radar Conference

By Lea McLees, RCT

At least 20 Georgia Tech researchers, most of them from GTRI, were instrumental parts of the 1994 IEEE National Radar Conference March 29-31.

Several GTRI employees helped arrange the conference at the Holiday Inn Crowne Plaza Ravinia, which was attended by 231 people representing 16 different countries. Others presented research papers or led tutorials, all related to the theme "Radar Developments in a Changing Global Economy."

"We in the radar research and development community have new applications,

new competitors and new allies," said General Chairman Bob Trebits (SEAL). "Partnerships among government, industry and academia represent a new way of meeting marketplace expectations. We must meet this challenge."

Topics covered at the conference included everything from radar systems, subsystems and phenomenology to signal processing, tracking and imaging.

The three-day gathering was dedicated to the memory of Fred Nathanson, a GTRI employee who died of cancer in June 1993. He is remembered for his book, *Radar Design Principles*, and for his dedication to spreading and sharing knowledge throughout the radar community. Nathanson and his wife, Lila, established the Fred Nathanson Memorial Radar Education Fund in late 1992.

The conference banquet included a tribute to Nathanson, in which Ed Reedy (RO),

Nathanson's daughter Janice Smith, and radar community friends remembered him. During the banquet Wayne Cassaday (SEAL) was presented the 1994 Young Radar Engineer of the Year Award (*see related article, page 1*).

In addressing the future of radar, banquet keynote speaker Larry Lynn, Deputy Undersecretary of Defense for Advanced Technology, discussed developments in military radar while noting that issues important 10 years ago remain so today. Ongoing issues include radar utility, especially against low cross-section targets; the ability to hide a radar, for survivability; and reduced cost and weight/improved reliability and maintainability.

Among the GTRI employees participating in the conference were Trebits (SEAL), general chairman; Cassaday (SDL), technical

Continued on page 7

**Focus
on
GTRI's
Future**

Rob Muzio (SDL) demonstrates equipment for Mary Beth Muzio, Katie Muzio, Christina Roberts, Rachel van Paepegem and Jennifer Bodnar during Take Our Daughters to Work day at CCRF. (Photo by Anita Edwards)

News & Notes

Renowned Astronomer Discusses, Displays Hubble Improvements

By Lea McLees, RCT

Most people know the Hubble telescope as the subject of jokes and ridicule because of a 100-inch mirror that could not focus and the blurry images it first produced.

Internationally known astronomer Margaret Burbidge has a different perspective. For her, the Hubble telescope, repaired and now transmitting stunning images of stars and galaxies, is a success story — and proof of one fact that she has learned over the years.

"Astronomers are not easily daunted," she said. "They were able to overcome the problem with the images."

Burbidge's April 20 presentation to about 90 students, faculty and staff members was sponsored by the University Center of Georgia, a consortium of colleges, most based in Atlanta. She presented the center's physics/astronomy visiting scholar lecture in the Howey Physics Building.

"Margaret Burbidge brings to science, and to astronomy in particular, a perspective and authority that young scientists people need in these times," GTRI's Allen Garrison (EOEML) told those gathered for the talk.

Burbidge knows the Hubble telescope well. She is principal investigator on the University of California/San Diego's (UCSD) contract with NASA for the science and data analysis program of Hubble's Faint Object Spectrograph. This sensitive device can reveal chemical compositions and relative velocities of distant objects. Burbidge also was a co-investigator on the plan to build the original Hubble faint object spectrograph.

Instead of bringing Hubble back to earth and replacing the defective mirror, astronomers decided to replace the primary camera and add corrective optics to the existing mirror. The optics were sets of mirrors and lenses, one set for each instrument, which corrected the images reaching each piece of equipment. They were installed during a space walk by space shuttle astronauts, who also fixed some troublesome solar panels and replaced deteriorating gyros that controlled the direction the telescope pointed, Burbidge said.

As she spoke, Burbidge shared vibrant color slides of images taken by Hubble with its corrective optics, including photos of Nova Cygni, an exploding star and

the Eta Carina, a very unstable, extremely massive star.

Astronomy is a worthwhile expenditure for several reasons, Burbidge said.

"It is good to know, for example, that the sun is five billion years old and still has another five billion years to go before it undergoes any drastic changes," she said.

Studying visitors to our solar system such as asteroids and comets, and learning what affects their paths and orbits, respectively, is imperative, she said, just as learning about the beginnings of the universe through astronomy is.

"Why spend money on astronomy?" she asked. "Of all the sciences, it most captures the public interest. We're all explorers and we're all interested in our origins and everything in this room is made of the elements of star dust."

A native of London, Burbidge is now a professor emeritus in the University of California school system and was a professor of astronomy at UCSD. She directed UCSD's Center for Astrophysics and Space Sciences for nine years, and was director of the Royal Greenwich Observatory in England during 1972 and 1973. Burbidge has led organizations such as the American Astronomical Society and the American Association for the Advancement of Science and has received numerous honors, including election to the National Academy of Sciences.

Spring has sprung at CCRF. Some of the resident geese were sunning by the lake with their little ones earlier this month. (Photo by Lea McLees)

Food From page 1

will be used in research for years to come.

The initiative builds on the already strong foundation that exists between the food industry, the University of Georgia, Georgia Tech, the state's Department of Technical and Adult Education, and a number of state agencies. It places expanded emphasis on training/education activities supporting improved work force development, technology transfer, and research activities supporting the environmental, food safety, food processing and product competitiveness needs of the industry.

In the initial funding year, programs are planned in sensor evaluation and development, environmental assistance, byproduct recovery, wastewater treatment enhancement, small minority owned business assistance, product nutrition/health enhancement, new process analysis assistance and food safety support. All FY95 funding is targeted for Georgia Tech, the University of Georgia, Valdosta State Regional University, Georgia Southern Regional University, and Fort Valley State College. Extensive cost matching is expected, particularly in the research area.

GTRI is taking the lead in sensors evaluation and development, and with Tech's School of Civil and Environmental Engineering, is working on portions of the environmental area. The University of Georgia is leading food safety research, new food products and processes, and the balance of the environmental research. The Department of Technical and Adult Education is heading work force development.

Significant interaction across research areas is planned and is critical, Wyvill



said.

"This is only the beginning of what we believe will be a long and productive program," said Wyvill. "GTRI has the potential, particularly with its strong electronics background, to contribute significantly to this initiative. Together with the academic units across campus and those at the University of Georgia, we could help turn Georgia into a major center for food processing research."

With that, the potential for attracting not only food companies, but allied industries such as equipment manufacturers and analytical laboratories, to Georgia will be significant.

May meetings are scheduled in three locations across the state to explain the initiative, and to attract broader participation and suggestions on future directions from Georgia's more than 500 food processing companies.

Planning for FY96 activities begins soon. If you are performing research related to this initiative, or know others on

campus who are, you may call Craig Wyvill at 894-3412 or send e-mail to craig.wyvill@gtri.gatech.edu.

Fellows Want Your Input

The GTRI Fellows Council was formed in 1993, partly to provide recommendations to the GTRI director from the research community without passing through the management chain. The Fellows invite continued comments and specific suggestions for improving the research enterprise at GTRI. You may contact any of the Fellows directly:

Krish Ahuja	AERO	528-7054
Larry Corey	SEAL	528-7156
Devon Crowe	CS	894-3500
David Flowers	ELSYS	894-7195
Bill Rhodes	EOEML	894-2929
Chris Summers	EOEML	894-3420

Daughters*From page 4*

no women who do that," she said.

Connie Price, Beth's 12-year-old sister, liked a project she saw at GTRI. "We learned about automatic test equipment that can fix itself," she said.

Bob Lang's daughter Tara, 10, in addition to being interested in being a baseball player, is also interested in her dad's job. "I also sort of want to be like my dad and do security and everything," she said.

To coordinate with schools' attendance policies and encourage participation, letters announcing the opportunity and bearing Director Richard Truly's signature were sent to schools CCRF daughters attend, and to county school superintendents. Parents took home permission slips and attendance forms for their daughters to use.

Jennie Tate (RSD), Molly Gary (SEAL), Wayne Cassaday (SDL), Krish Ahuja (AERO), and Martha Willis (SEAL) organized CCRF's TODTW program. Rounding out the volunteers group were Anita Edwards (SDL), Bob Englar (AERO), Andy Entrekin (AERO), Alex Fleming (AERO), Rich Gaeta (AERO), Bill Hayden (AERO), Beverly Hutchinson (SEAL), Kay Lindsey (SDL), Jeff Mendoza (AERO), Rob Pauley (SEAL), Janice Porter (VP&D), Jim Scheer (SEAL), Marilyn Smith (AERO), Rob Stoker (AERO), Sherry Travis (AERO), Richard Truly (VP&D), Ron Walterick (AERO), and the many parents who transported children to NAS.

Our guest writer Sarah Peery, 13, visited GTRI with her friend Judy Cooper (RO). She went to a class, saw the Tech campus, and helped write this article.

Radar*From page 5*

program chairman; Marvin Cohen (SEAL), one of several people who arranged tutorials; Jim Wiltse, principal research engineer emeritus, speakers; Guy Morris (SEAL), publications; Joe Bruder (SDL), publicity; Lacey Moore (SDL), local arrangements; Neal Alexander (SEAL), finance; and Reedy and retired principal research engineer Josh Nessmith, AESS advisers. Local members of the technical program committee were Larry Corey (SEAL), Nick Currie (SDL), and James McClellan (ECE). Director Richard Truly gave the welcome for the conference.

Representatives from Georgia Tech made several presentations:

- Melvin Belcher (SEAL), Jeff Holder (SEAL) and Josh Nessmith (retired), "Precision Tracking Performance;"

- Soonjoo Hwang and Douglas Williams (ECE), "A Constrained Total Least Squares Approach for Sensor Position Calibration and Direction Finding;"

- Jeffrey Schodorf and Douglas Williams (ECE), "Sensor-Efficient Angle of Arrival Estimation for Constrained Signals;" and,

- Mary Ann Ingram (ECE) and Jeff Holder (SEAL), "Adaptive Space-Time Processing for Radar Receive Arrays with Time-Varying Two-Dimensional Subband Decompositions: The SDLMS Algorithm."

- Tutorials were offered by Jim Scheer (SEAL), "Coherent Radar Performance Estimation"; and Melvin Belcher (SEAL) and Josh Nessmith (retired), "Phased-Array Radar Systems — Resource Management."

Cassaday*From page 1*

young IEEE/AESS members, according to the letter announcing Cassaday's selection.

Cassaday's accomplishments include technical contributions in radar phenomenology, instrumentation, radar design and development, and radar system analysis and algorithm development. He constructed a 95 GHz coherent radar and supporting millimeter wave radar cross section measurements; and developed the calibration code and procedures to support Chicken Little (an Army project) target and clutter measurements.

Cassaday is directly responsible for GTRI's support of the Patriot missile multimode sensor upgrade, including one effort that supported Desert Shield/Desert Storm. That particular effort resulted in a letter of commendation from the Army.

Cassaday also is active in professional service to the IEEE, teaches short courses for radar professionals and is an excellent engineer, says Ed Reedy, Director of GTRI's Research Operations.

"In my more than 26 years working in the radar field, Wayne Cassaday represents one of the most dedicated and hardworking engineers, young or old, with whom I have had the privilege of being associated," Reedy wrote in Cassaday's nomination letter. "However, the trait that clearly establishes his uniqueness is the willingness to accept major responsibilities and to provide leadership."

Cassaday enjoys his work because of the people he interacts with and the field assignments.

"I like getting out of the office, working with other people, and doing unusual projects," he says.

Among his more unusual locations for a project was the South Pacific. He spent 3 1/2 years there working at an Army missile testing and satellite tracking facility.

Cassaday says his main goal is to continue work with his division at GTRI.

"I really just want to keep the staff in our division together and working on radar related projects," he said. "That's the most important thing to me right now."

IEEE/AESS is considering renaming the honor the Fred Nathanson Memorial Award, in recognition of the GTRI employee and radar community leader who died of cancer on June 20, 1993. The conference at which the award was presented was dedicated to Nathanson's memory, and his family members were present.

"I think it would be fitting for the AESS to rename it for him," said Cassaday, a colleague of Nathanson's. "In Fred we've lost a really outstanding member of the AESS."

Cassaday is planning ahead for another generation of potential radar engineers. He says the monetary award that comes with the honor will go into the college fund for his one-year-old daughter, Hope.

See related article, page 5, on the National Radar Conference.

GTRI Greetings!

Welcome to one of our newest employees!

1. Gail Woodward is a research associate and MAPS Unit 6 manager.

2. She comes to GTRI from 7 1/2 years at Stanford University in California, where she worked on the academic side.

3. At Stanford, Gail helped utilities, operations and facilities project managers determine and monitor their budgets, which totaled \$50 million.

4. She holds a bachelor's degree in economics and business, and a master's of business administration in finance and economics from Arizona State University in Tempe.

5. Gail wants to help project directors make their budgets useful tools. Her goal is to forward the mission of the MAPS group, which is to support GTRI project directors, other project personnel, laboratory directors, and all other levels of GTRI management with assistance in budgeting and otherwise managing financial resources.

6. Gail is a native of Winnetka, Ill. and has lived in such diverse places as Germany and the last logging camp in the country, located in Oregon near Klamath Falls.

7. Her sister, Karen Harmon, is the Department of Defense investigator at Georgia Tech. Gail has two grown daughters who live in Williamsburg and Denver.

8. After work Gail enjoys gardening, reading, playing bridge and traveling.

9. Future plans include trips to Alaska or the Catskills, a good skiing spot, and London or Germany between now and late 1996. She also might continue her education in finance/economics.

10. Gail has two perfect cats, Morris and Blackbird, and has been pleased to find that MAPS is full of fellow cat-lovers.



Gail Woodward

News & Notes

Georgia Tech
RESEARCH INSTITUTE

Focus on Folks

Correction: Jeffrey Farley is a research technologist I and Shane McWhorter is a research scientist II. These positions were listed incorrectly in the March/April issue. We apologize for the error!

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Professional Activities

Aerospace Sciences Laboratory

Bob Englar has been re-elected to the Applied Aerodynamics Technical Committee of the American Institute of Aeronautics and Astronautics. He was one of the original founding members of this committee when it was initiated in the late 1970s. The first required meeting of this committee is in June at the 12th Applied Aero Conference in Colorado.

Electronic Systems Laboratory

In January, **Jeff Gerth**, **Deborah Mitta** and **Phil West** presented "Designing High Technology Workstations: Building Usable Interfaces for Medical Devices" at the annual meeting of the Society for Technology in Anesthesia. The meeting was held in Orlando, Fla.

Mike Kelly and **Deborah Mitta** have been appointed "Special Editors" by the journal *Human Factors* to prepare and publish an issue in 1996 on human factors of Intelligent Vehicle Highway Systems. This is an important step toward having GTRI's Human Factors Branch recognized as the world leader in IVHS human factors.

Electro-Optics, Environment and Materials Laboratory

Four members of the Communications and Technology Transfer Branch received awards from the Society for Technical Communication in this year's publications contest. **Stephanie Babbitt** and **Rae Adams** won a Distinguished Award, the highest offered at the local level, for *Poultry Tech*, the Agricultural Technology Research Program's newsletter. **Nancy Davis** and **Leigh McElvaney** received an Award of Excellence for a daily newsletter produced for the 1992 International Society for Technical Communication Conference. McElvaney also won an Award of Merit for the series "Tech WREC Tips." Davis and McElvaney received an Achievement Award for *Centerpoint*, a Hazardous Substance Research Centers publication. Entries that won Distinguished and Excellence awards will compete at the international level.

Chris Downing presented "Improving Indoor Air Quality and Energy Efficiency" at the Environment Information Association annual meeting in San Diego March 16.

On March 22, **Kirk Mahan** was a judge in the Statewide Seat Belt Safety Poster Contest. Children from kindergarten through twelfth grade submitted more than 60,000 posters for this year's contest. The winning posters will be printed in a calendar next year. On March 24, Mahan represented Georgia Tech at the Project Safe Georgia meeting at Georgia Pacific in Warrenton, Ga. Kirk presented three safety talks to attendees, including information on confined space entry, emergency response, and resources available

from Georgia Tech.

John Nemeth has been asked to serve on the statewide Planning Advisory Committee, established under the Georgia Planning Act of 1989. The committee advises the Georgia Department of Community Affairs on land/resource use planning topics including local, regional and state planning standards and procedures; mediation implementation, developments of regional impact, and regionally important resources; coordination with local governments, regional development centers, state government and the private sector; training opportunities and public education efforts; and policies and procedures.

Myrtle Turner-Sippio presented "Title X (The Residential Lead-Based Paint Hazard Reduction Act of 1992): The Real Estate Investor's Perspective," at the March 10 meeting of the Georgia Association of Real Estate Investors in Atlanta. She also participated in the Georgia Tech WISE (Women in Science and Engineering) Mentor Program on March 17. Turner-Sippio presented a program on "Air Sampling and Calibration for the Industrial Hygienist" to Bonita Lowey's sixth grade math classes at Ridgeway Middle School in Sandy Springs, Ga.

Signatures Technology Laboratory

James G. Maloney received the R.W.P. King Award for his paper, "Optimization of a Conical Antenna..." (with G. Smith) published in the July 1993 issue of *IEEE Transactions on Antennas and Propagation*. The award recognizes the best paper by an author under 36 years old. In addition, a May 1993 paper, "A Study of Transient Radiation from the King - Wu" (with G. Smith) was so close to first place in voting for the Schelkunoff Best Paper Award that it was given an Honorable Mention for the Schelkunoff Award.

Systems Development Laboratory

Tracy Wallace and **Lamar Gostin** taught the last week of the Basic Radar Training Course at the U.S. Army ARDEC, Picatinny Arsenal, NJ, April 12 - 15. They conducted a detailed microwave measurement laboratory for the 10 Army students on-site at Picatinny Arsenal. This exercise completed a seven-part course on radar systems. The students were given diplomas in a small ceremony at the end.

Nick Currie and **Bob McMillan** taught the first week of the new U.S. Army ARDEC MMW, IR, and Field Testing Training Course at Picatinny Arsenal, NJ, May 3-6. The course is a seven-part course in MMW and IR and includes a two week laboratory at CCRF in September 1994, in which the Army students will participate in MMW and IR measurements.

Personnel News

Administrative Information Systems Team

Three new co-ops began work this quarter: **David Garrett**, **Kimberly Pullen**, and **John Butler**.

Electronic Systems Laboratory

Ann Dunchew transferred from Division Secretary in the Concepts Analysis Division (ELSYS) to the position of ELSYS Lab Secretary.

Systems Development Laboratory

Harry P. Hass (REII) transferred to SEAL on April 4.

Personal Notes

Congratulations!

Lee Hughey's (AIST) son, Lt. Rich Hughey, attended the U.S. Navy's "Top Gun" School at Miramar, Calif. He was one of two people selected by his commanding officer to attend this very prestigious school, and is there to train fleet pilots. Rich flies the F-5.

Bert Watkins's (RPT) son Robert rolled a perfect 300 game in bowling March 13. He competed in the City Tournament held at Maxey Suburban Lanes in Decatur. Robert began his next game with six consecutive strikes and ended up with a 763 series. He will be awarded a gold American Bowling Congress 300 Game Ring.

Bob McMillan's (SDL) daughter, Natalie McMillan Isaza, graduates from the University of Florida College of Veterinary Medicine on May 29. In June she begins a one-year residency at Cornell University.

After Hours

Bill Borland (STL) performed as incidental soloist with the Atlanta Symphony Chamber Chorus in their recent concerts at Atlanta's Symphony Hall and New York's Carnegie Hall. Borland has sung with the chamber groups under the direction of Robert Shaw since coming to Atlanta and GTRI in 1989. He also performs with the Atlanta Singers and Atlanta Opera, in addition to his staff soloist position at North Avenue Presbyterian Church.

Wedding Bells

Greg Williams (EOEML) married Kathy Doll on March 26...**Ashley Slappy** (SDL) married Cindy Clauson on April 9.

Cradle Roll

Carol and **Mason Gross** (EOEML) welcomed a son, Alexander Markwalter, on March 7...**Robyn** and **John Andrews** (SDL) welcomed a baby girl, Kiera Marie, on March 10...**Meredith** and **Mike Brinkmann** (SDL) welcomed a baby boy, Andrew Michael, on March 31...SDL has two sets of first-time grandparents. **Joe Parks** has a grandson, Brian Jackson Parks, born on March 25, and **Carey Floyd** has a granddaughter, Lauren Elizabeth Moncrief, born on Easter — April 3...**Pat Rose** (SDL) has a new grandson, John Howard Rose II, born on April 8.

Our Sympathy

... to **Mike Brinkmann**, whose mother, Mary Margaret Brinkmann, died on March 27...to the family of Florence Pettit, 79, widow of former Tech President **Joseph Pettit**. She died April 25.