

# The GTRI Connector

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October 1995

## Rhodes Pursues International Research Opportunities for GTRI

By Lea McLees, RCT

An EOEML researcher is exploring international research opportunities for GTRI in Europe.

Bill Rhodes, who is also a professor in the School of Electrical and Computer Engineering, is at the Georgia Tech Lorraine



Bill Rhodes

campus in Metz, France until the end of March 1996. He is working with Tim Drabik (Electrical and Computer Engineering) and GT Lorraine Director Hans Puttgen to establish a national laboratory research program at GT

Lorraine supported by the Centre National de la Recherche Scientifique (CNRS). CNRS is the French federal department responsible for the bulk of basic research conducted in that country.

"Georgia Tech has a draft proposal, written largely by Drabik, that is circulating among CNRS labs," said Rhodes, a Georgia Tech employee for almost 24 years. "CNRS and the Lorraine Valley Regional Government would like to see a basic laboratory research program established in Metz."

The research program would focus on the introduction of optics into digital systems.



Lisa Detter-Hoskin shares IR and Raman spectroscopy experiences during "IR and Raman Spectroscopy Technology Day." PHOTO BY RICK ROBINSON.

## EOEML Materials Analysis Center (MAC) Hosts Infrared/Raman Spectroscopy Technology Day

The EOEML Materials Analysis Center (MAC) (under the direction of Lisa Detter-Hoskin) and Nicolet Instruments recently hosted an Infrared (IR) and Raman spectroscopy technology day at Georgia Tech. The program generated a dialog between academia and industry on recent ad-

vances in IR and Raman spectroscopy research and instrumentation.

During the morning session, papers on the theory, sample preparation and current applications of the spectroscopies were presented. In the afternoon, participants ran samples on instrumentation and results were interpreted and discussed. The following organizations and companies participated in the technology exchange: Georgia Tech (MSE, ECE, Chemistry and GTRI); Arcade; Georgia Pacific; Union Camp; Akzo Eka; Ciba Vision; Motorola; Hickson; and DuPont.

"France does not have a computer industry per se, but they have a very strong communications industry," Rhodes explained. "It is expected that optics will play an important role in French telecommunication systems."

Rhodes' pursuit of opportunities in Eu-

rope works toward GTRI's strategic planning goal of developing international research contracts.

"The CNRS program, if we have one at GT Lorraine, will help GTRI automatically gain in visibility in the French research com-

*Continued on page 2*

## Observed & Noted

This month we continue to meet members of the facilities services staff at Cobb County. *Three additional colleagues are profiled on page 2.*

Have a question about the Olympics? *It may be among those*

*answered on page 3.*

Our own Phosphor Technology Center of Excellence is sponsoring the first International Conference on the Science and Technology of Display Phosphors. *Turn to page 3 to learn more.*

Food, fun, friends and family were plentiful at the GTRI Fall Festival. *See pages 4 and 5 for photos and an article.*

Bud Sears has been named ELSYS' new lab director. *Read*

*about his past experience and future plans on page 6.*

Lloyd Lilly recently retired from GTRI. *Turn to page 6 to learn about his GTRI accomplishments.*

Three new employees are featured in this issue. *To meet them, turn to page 7.*

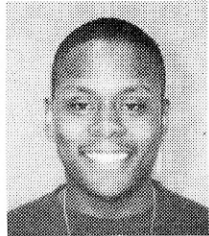
Several of our colleagues received diplomas recently. *To find out who has graduated, turn to page 7.*

GTRI employees gave FASET program freshmen an overview of our organization. *For a picture, see page 8.*

Professional and personnel news fill the back page. *Turn this issue over to catch up with your colleagues.*

# News & Notes

## Meet CCRF Facility Services



Bill Perkins

This month we continue meeting the Facility Services staff at the Cobb County Research Facility (CCRF). These are the folks who provide maintenance and/or construction services for the entire Cobb County facility, which is home to the SEAL, SDL and AERO labs and employs some 260 people in eight buildings.

In the words of manager Rusty Embry, "We do construction, installation of locks, stuck toilets — everything."

**Bill Perkins** is CCRF's custodian supervisor. He joined the staff in July 1990 in a supervisory role, after working two years as a contract cleaner for GTRI. Bill supervises a custodial staff of four, responsible for across-the-board maintenance of the Cobb facility. In addition to cleaning, Bill and his colleagues also look after CCRF's recycling chores, finding methods for dealing with hard-to-recycle items such as cardboard boxes, phone books and slick magazines. Bill grew up in Toledo, Ohio, and came to Atlanta in 1987 to attend Clark Atlanta University, where he studied personnel management. In his spare time, Bill likes to drag-race and lift weights, and he continues to build his collection of artifacts related to African-American history.

**Barbara Tyler**, custodian, has been



Barbara Tyler



Rosalva Elizalde

with GTRI since April 1992. She started at the main Georgia Tech campus as a Rambler a while before that, then moved to Cobb and has been there ever since. Her responsibilities include the entire range of cleaning the facility's buildings. Barbara, originally from the small town of Molena in South Georgia, moved to Atlanta in 1964. She is married, with two grown children — a son, 24, and a daughter, 28. In her spare time, she serves as secretary to her church, God's House of Prayer on Memorial Drive in Atlanta, and one of her main pastimes is going to yard sales and flea markets.

**Rosalva Elizalde** has been with GTRI a year-and-a-half as a custodian. She started as a temporary worker with Georgia Tech, and subsequently GTRI hired her full time. Rosalva views her job as "making sure that everyone is satisfied" with the condition of the Cobb facility. She came to Atlanta in 1985 from Gonzales, Mexico, where she grew up and where her mother still lives. Rosalva lives in Smyrna, which is handy to her job at GTRI. She has relatives in the Atlanta area — her brother and his son — but Rosalva says she doesn't really have much spare time for visits or pastimes. "My hobby is work," she says.

## Rhodes

From page 1

munity," Rhodes explained. "Using the CNRS program as a core effort, we hope and expect to develop a variety of collaborative research programs with other CNRS labs in France and in other European community countries."

One of those countries is Germany. In August, Rhodes was one of 12 international scientists who met with directors of the Max Planck Institutes to discuss creating another such institute in Jena, Germany. Named for famous physicist Max Planck, the institutes promote basic research.

"If established, the new institute in Jena would concentrate on research in optics and information," Rhodes said.

While in France, Rhodes and Drabik will visit CNRS laboratories in Limoges, Marseilles, St. Etienne, Paris and Besacon. Rhodes will also be teaching graduate courses in optics, signal processing and systems. One of Rhodes' doctoral students, Kevin Bowman, who was an early graduate of the GT Lorraine program, will be with Rhodes working on his thesis and assisting in research development activities.

"While there, I want to do whatever I can to contribute to the success of the GT Lorraine program," Rhodes said. "GT Lorraine presents an outstanding opportunity for Georgia Tech students, and I hope to see the program develop to its full potential."

*Rhodes will be in full contact with the campus while he's in France. If you're interested in the CNRS initiative or other aspects of this work, you can reach him via e-mail at [bill.rhodes@gtri.gatech.edu](mailto:bill.rhodes@gtri.gatech.edu).*

## SELECTED AUGUST 1995 AWARDS

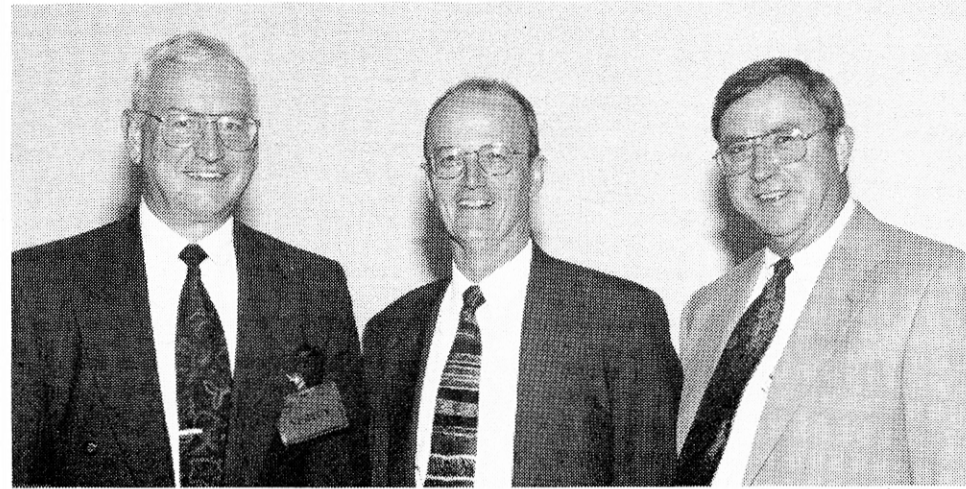
Title	PI/Laboratory	Sponsor	Funded Amount
MH-60G Structural Integrity Modifications	Crawford, C. (AERO)	Air Force	\$ 84,200
Electronic Warfare Techniques Analysis	Lilly, L. (ELSYS)	Air Force	362,000
Electronic Combat Test Engineer's Workstations, Amend. 3	McDougal, G. (ELSYS)	Air Force	350,000
Electronic Test Process Development	McDougal, G. (ELSYS)	Air Force	810,000
RF Receiver Workstation & Model Development	McDougal, G. (ELSYS)	Air Force	199,574
Privatization, Regional Development & Democratization in Bulgaria	Paskaleva, K. (EOEML)	National Science Foundation	78,711
GTSIMS Installation and Training for Boeing Defense & Space Group	Sheffer, A. (EOEML)	Boeing Aerospace Co.	32,874
Imaging Tracker Countermeasures	Mullikin, A. (EOEML)	Navy	162,000
Simulation & Analysis in Support of CMD-ACTD	Dalton, J. (HRO)	Army	197,883
Evaluation of Small Antennas for FCC Part 15 Cordless Phone	Collins, D. (ITL)	Beltronics Corp.	49,546
Executable Protocol Specifications	Butler, W. (ITL)	Army	75,776
Migration to ATM	Evans, J. (ITL)	Army	153,992
Command Vehicle Analysis	Wilson, B. (ITL)	Army	614,111
Project 50013	Wilson, B. (ITL)	Army	200,000
Tech Support for SWBSADIS Phase 2B	Pennywitt, K. (ITL)	Logicon Eagle Technology	283,869
Mapping System Enhancement and Support	Pyles, J. (ITL)	Army	398,468
Radio Station Analysis	Willson, B. (ITL)	Army	498,556
Phased-Array Antenna Measurement & Statistical Characterization	Muzio, A. (SDL)	Army	46,336
Vulnerability Analysis & Test Support	Daher, J. (SEAL)	Mission Research Corp.	89,999
MMW Multipath Model Validation	Saffold, J. (SEAL)	Army	39,997
Non-Cooperative Target Recognition Technology Issues	Cohen, M. (SEAL)	Air Force	255,777
Electronic Systems FME/FSA	Cotton, R. (SEAL)	Navy	239,000
Strategies for MTI Countermeasures	Friederich, P. (STL)	Orion	52,745
Workshops and Documents	Meadors, J. (STL)	U. S. Dept. of Defense	210,000
RCS & IR Signature Simulation Support	Sidhu, J. (STL)	Johns Hopkins	105,000

## Goal of First International Phosphor Conference: Live Long, Shine Bright and Prosper

The first International Conference on the Science and Technology of Display Phosphors will be held November 14-16 at the Mission Valley Hilton Hotel in San Diego, Calif. The conference, sponsored by the Phosphor Technology Center of Excellence headquartered at Georgia Tech, the U.S. Advanced Research Projects Agency (ARPA) and the Society for Information Display, will discuss the current status of and future prospects for phosphors, materials that convert the energy of electrons or ultraviolet radiation to visible light.

"Now that there is widespread agreement that electronic information displays will be strategic elements in worldwide economic development — as well as in the development of military and aerospace systems — until well into the next century, we are looking at all of the elements that can increase display brightness, power efficiency and lifetime, and endow them with truer colors," said Christopher Summers, Director of the Phosphor Technology Center of Excellence and chair of the conference's program committee. "Phosphors rank high among these crucial elements."

Invited speakers include leading people in the phosphor and display fields from Japan, China, Germany and the United States. Niel Yocum of David Sarnoff Research Center will discuss "Fu-



ture Requirements of Phosphors, from the Perspective of Phosphors' History." C. W. Tang of Kodak will survey the newly energized field of organic electroluminescence, and Makato Morita of Siekei University in Japan will talk about "Small Particle Phosphors for Displays," a phosphor variation that promises greater efficiency and brightness for exciting low-voltage devices such as field emitter displays. To encourage discussion and interaction, the program committee is selecting 50 papers in the areas of phosphor growth and synthesis, physics and chemistry, screening and device technologies (electroluminescence, field emission and cathode-ray tubes and photoluminescence for plasma displays). The papers will be presented in a single-session format.

For registration and hotel information for Phosphors '95, call Mark Goldfarb, Palisades Institute for Research Services

at (800) 787-7477 or (703) 413-3891, or send a fax to (703) 413-1315.

*The Phosphor Technology Center of Excellence (PTCOE) is a consortium including Georgia Tech, University of Georgia, University of Florida, Pennsylvania State University, Oregon State University, David Sarnoff Research Center and the American Display Consortium. ARPA established PTCOE in 1993 to develop a world-class research and educational program in phosphor technology and to support the high-definition display industry with state-of-the-art enabling technologies.*

*ARPA is an agency of the U.S. Department of Defense dedicated to promoting advanced technology needed to further DoD's mission.*

*The Society for Information Display is an international society devoted to the advancement of display technology, manufacturing and applications.*

*The Honorable Paul G. Kaminski, Undersecretary of Defense Acquisition and Technology, left, visited GTRI Oct. 2. While here he learned about GTRI's structure, organization and capabilities, was updated on our current research, and toured the Georgia Tech campus with President Wayne Clough. Ed Reedy and Gerald Smith, right, were among those who met with Kaminski during his visit. PHOTO BY DAYTON*

## Countdown to 1996

### *How will the Olympics affect graduate research assistants and graduate teaching assistants?*

GRAs and GTAs will have access to the campus during the period of the Olympic Games, provided they are conducting research during the period. Research will need to be continued to satisfy the terms of grants and contracts.

The intention is for pay periods to be the same as they were this past summer. The number of GRAs and GTAs employed during the summer of 1996 should not differ significantly than for the summer of 1995.

GRAs and GTAs needing access to the library during the Olympic Period should apply this quarter for a permit into the Village Security Zone (inner zone).

A major concern at this time is where graduate students are going to live. Attempts are under way to ascertain the number of beds that Georgia Tech should attempt to lease off campus to provide for graduate students, as

well as for co-op students on work quarter in the metropolitan Atlanta region.

**Source: James Stevenson, Executive Assistant to the President, Georgia Tech**

### *Will the Olympics affect the status of co-op student employees working on and off campus?*

Here's how it looks right now: There will be some fairly minor changes made in the duration of co-op work periods.

Those working during spring term 1996 will be able to work to June 28, giving them some 14 work weeks, or about two weeks longer than usual. Those working during the summer term will normally work from July 1 to Oct. 3, which will give them some 14 work weeks also, which is about three weeks longer than usual.

However, those working during the fall term will report on Oct. 7 and work up to Christmas, which will give them 11 or 12 work weeks, down slightly from the usual fall-term total of 14 weeks.

In any event, co-op students in any

term must work at least 11 weeks, which is the length of a normal quarter.

Those students who are normally in class during the summer will be expected to enroll in the seven-week 1996 summer term, which will go from Aug. 12 to Oct. 2. The 1996 fall term will begin Oct. 7.

Co-op students working on campus will have to go through security-clearance procedures like other employees. For those working in the Village Security Zone, the credentials required will be more extensive than for those working in the Research Controlled Area.

Students who aren't working on campus won't be permitted to enter the campus during the Olympic period. They will need to complete their business (including consulting with advisers) either off-campus or by phone or email.

By the way — any of the above plans could change, though the dates probably will stay as they are.

**Source: Thomas M. Akins, Director of the Co-op Division, Georgia Tech**

# Focus on Fall Fest

## GTRI's Fall Festival A Sunny Success

Try as she might, Hurricane Opal didn't rain on GTRI's parade.

Two days after Opal's Oct. 5 visit to Georgia, the Cobb County Research Facility was debris-free, had electric power and was ready for guests attending the GTRI Fall Festival.

The guests, all family, weren't disappointed. Awash in crabapple-laden trees, impatiens and other blooms and decorated with pumpkins, hay bales and balloons, CCRF received many compliments from employees, friends and relatives — prominent among them the fact that this location offered plenty of room for sitting outside in the sun, enjoying each other's company. Employees also were glad to have the event on a Saturday instead of a weekday — many said they enjoyed being able to spend more than a hurried lunch hour with GTRI friends.

"All the comments I heard were good ones," said festival chairperson **Cheryl Lilly** (ELSYS). "Everyone certainly seemed to have a good time, and no one should have left hungry."

"The festival committee did a great job, and I am grateful to them for all their hard work," she noted. "Everyone worked together as a team to make sure that everything was coordinated properly."

An estimated 600 employees and family members attended the Oct. 7 festival.

Those who weren't basking in the sun chose from a variety of activities. Some created Spin-Art; others played basketball or passed footballs to win prizes while still others tried to send a plastic frog hopping into a big jug. Younger attendees bounced around in the Moonwalk, created colorful pictures of Buzz or admired the helium balloons they received.

Joining current employees were members of GTRI's extended family — retirees **Larry Holland, Bob Willoughby, Lloyd Lilly, Bill Howard, Martha Ann Stegar, Yalcin Peker, Sam Alford** and **Don Esper**.

The main course was fried chicken with all the trimmings from Mrs. Winners restaurant. Potato and pasta salad, baked beans, chips, biscuits, and plenty of iced tea, lemonade and soft drinks rounded out the menu. Hard candy, cotton candy and popcorn beckoned, along with three different types of ice cream. B98.5 FM and disk jockey Chris Monroe provided music.

After lunch **Wanda Fox** (AIST) taught line dancing. Others played softball and volleyball. **Cindy Roberts** (VPDIR) oversaw a coloring contest for children, judged by **Sheree Collins** (EOEML) and **Lea McLees** (RCT). Entrants colored Buzz designs by **Judy Wiesman** (ELSYS).

Hats are off to a number of employees for making the festival an event to remember. **Rusty Embry** (SSD) ensured that CCRF was looking great after Opal's unexpected visit. **Elaine Baran** (STL) designed the invitations and name tags, and she and **Kim Toatley** (MAPS) contacted retirees. **Carey Floyd** (SDL) and **Maggie Harrison** (AERO) worked closely with **Grover Richardson** (SDL) to line up activity locations and out-

door electric power at CCRF, and Grover set up the sound system. **Miriam Crenshaw** (ITL), **Adrienne Harrington** (ELSYS) and **Sheron Meyers** (EOEML) worked with Mrs. Winners restaurant on catering.

Cindy, Wanda and **Rebecca Bennett** (FSD) coordinated all the activities and located needed sports equipment. **John Toon** (RCT) and Lea shot photos of the event, and **Kate Holwill** (RCT) prepared the post-festival photo boards to be exhibited in GTRI buildings. Grover, Carey, Maggie, Cindy, **Judy Parks** (SDL), **Tammy Williams** (SEAL) and **Allan Williams** (SDL), festival co-chairperson **DW Senn** (SSD) and his wife, **Gloria**, and Cheryl all arrived at CCRF at 8 a.m. Saturday morning to make sure everything was ready by 11 a.m. The clean-up committee was joined by **Rusty Roberts** (SDL).

Leftover food was donated to Calvary Children's Home in Smyrna.

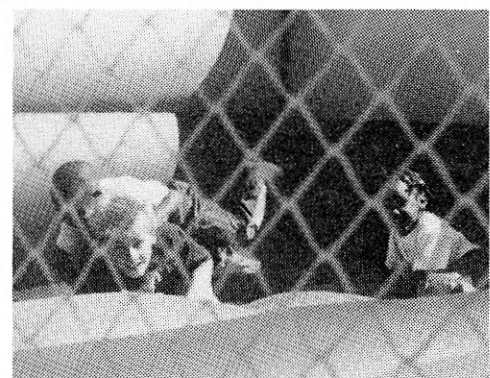
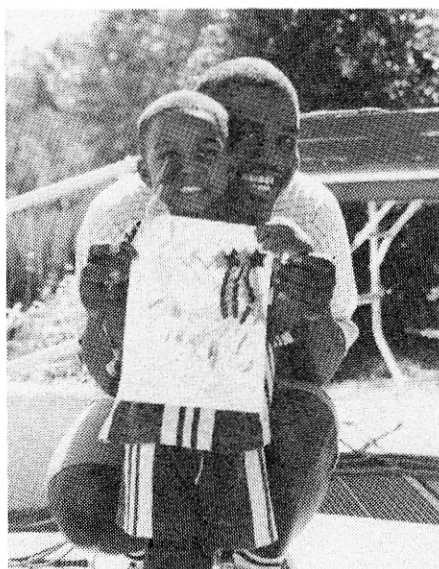
(If your child is named Cissy, attended the picnic and entered the coloring contest, contact Cheryl Lilly at 528-7036. Cissy won her age group, and a stuffed Buzz is waiting for her in Cheryl's office.)

### Thank You!

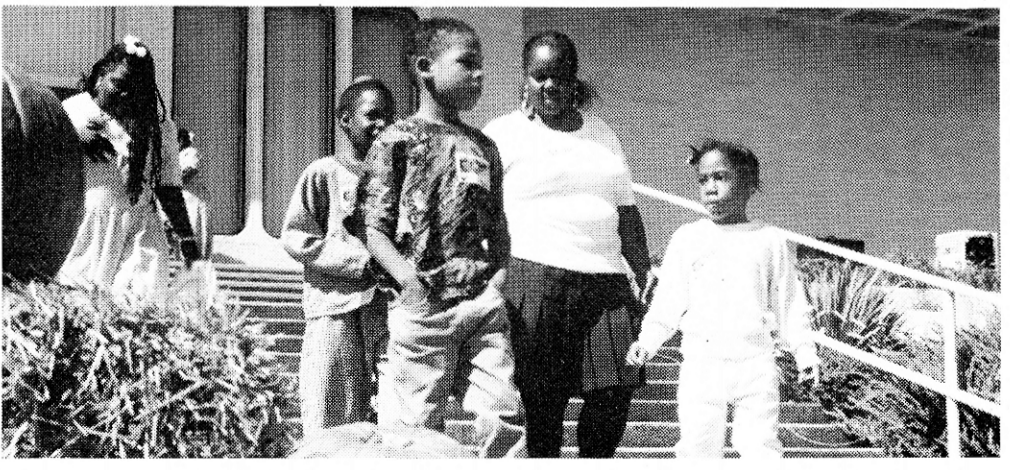
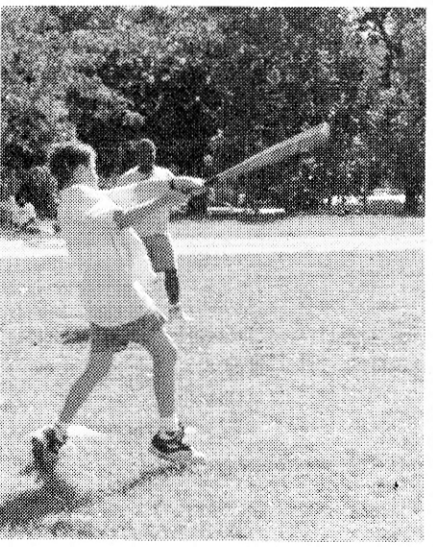
These companies donated items for the GTRI Fall Festival:

**potato chips:** Old Fashioned Foods (they supply our vending machines)

**paper products:** McDonald's, Northside Drive; Burger King, Northside Drive; and Papa John's, 10th Street



**Focus  
on  
Fall  
Fest**



**Focus  
on  
Folks**

**GTRI Veteran  
Sears Named New  
ELSYS Director**

By Rick Robinson, RCT

After a nationwide search for a new director for the Electronic Systems Laboratory, the answer has been found right at home. William E. (Bud) Sears III was



**Bud Sears**

named in mid-August to the position vacated by the retiring Larry D. Holland.

The name Bud Sears is a familiar and respected one at GTRI. He has been with the organization for 28 years and has held the

title of Division Chief, Concepts Analysis, for 17 years. In a recent memo, GTRI Director Richard H. Truly termed Sears's career "impressive."

When Sears heard of the decision, he said, it was the crowning moment of his GTRI career: "I was elated."

Sears, 50, does not foresee major changes in either the direction or management of ELSYS. There will be, he said, "some shift in management style, but no significant shift in values. ... Larry Holland and I see eye-to-eye on major issues."

CRB-based ELSYS, one of GTRI's biggest labs, is in good shape, financially

and otherwise, Sears reports. The budget remains at \$7 million, reduced only slightly by the spin-off of the Arlington Research Group. Moreover, in spite of ELSYS's many contracts and deadlines, the lab's on-time deliverables performance has been running close to 100 percent.

Meanwhile, a new Strategic Plan for ELSYS is in the works, with completion expected around Nov. 1. One task Sears anticipates is an internal reorganization, spurred by program growth that has put lab space at a premium. In developing a reorganization plan, Sears will be requesting opinions from ELSYS managers as well as former director Holland.

Another priority identified by the new director is ELSYS' need to remain stable in a declining defense-budget climate. "We are interested, where it makes sense, in expanding our customer base to other government departments as well as customers outside U.S. soil," he said. ELSYS has already performed research for Turkey, and talks with Australia are in the works.

Total quality management, a work approach that promotes ever-improving quality control, will be a priority for Sears, as will be strengthening ties with resident instruction units. Sears wants to see an already "happy relationship" with academic departments — in which ELSYS personnel teach and professors participate in ELSYS research — continue to expand.

Sears, who earned bachelor's and master's degrees in electrical engineering

from Georgia Tech in the late 1960s, describes himself as a "technical manager." Despite being a line manager for 17 years, he says, he has remained active technically.

That appraisal was seconded by Truly when Sears' promotion was announced. He described the new ELSYS director as "an internationally recognized expert in the field of electronic combat systems, computer simulation, radar and communications systems." Sears has written or co-written a lengthy list of publications and is sought after as a lecturer.

At the same time, Sears describes himself as a man "who likes people." He will make it a priority to meet ELSYS sponsors he doesn't already know.

In addition to this demanding agenda, Sears acknowledges that he has a "personal pet project": the development of a true android prototype. This goal is already being pursued in several quarters, including the Massachusetts Institute of Technology and Japan, Sears notes. He hopes to see Tech become a leader in this field, which he believes will produce a working model sooner than most people realize. "It's no longer pie-in-the-sky," he contends. "A first prototype is 20 years away or less."

Georgia Tech, Sears says, possesses the right stuff for such a project. "We are a unique place ... that already has all the necessary talents" — including the computer, mechanical and biological expertise — to produce a true android.

Clearly, Bud Sears will be a busy man in his new position. But then that's the way he likes it. "I am definitely an active person," he says, "not a passive one."

**Lilly Honored at  
Retirement Reception**

Colleagues and family members turned out in force recently to honor Lloyd Lilly for his 20 years of work at GTRI.

At least 48 people attended a September 18 retirement reception for Lilly, including his son, Bob Lilly, a Tech graduate and former GTRI employee; his daughter-in-law, Suelin; and his 3 1/2-year-old granddaughter, Angelina.

Director of Research Operations Ed Reedy started things off by presenting Lilly a plaque noting that Lilly's loyalty and friendship to GTRI would always be remembered.

Says newly appointed ELSYS Lab Director Bud Sears, "Having been Lloyd's predecessor as manager of the EW Techniques Analysis program, I know what challenges he faced in keeping everyone happy with the program. Lloyd has done a fine job."

Lilly's research and analysis during his years at GTRI related to electronic warfare, radar and weapons systems. He was project director of Electronic Warfare Techniques Analysis for the U.S. Air Force's Wright Research and Development Center, funded at more than \$51 million since 1978. He has directed tasks involving Soviet fuzes, air-to-air missiles, airborne interceptor radars and radar warning receivers.

Lilly also has worked with scenario

development, electronic countermeasures technique effectiveness analyses, threat systems analysis and characterization mission profile, delivery tactic optimization and survivability studies for various aircraft.

Prior to his GTRI career, Lilly served in the U.S. Air Force for 22 years. He was chief of digital communications for the Air Force Communications Service, retiring as a Major. Previously he worked as navigator, and also served as an electronic warfare operator on 96 combat missions in Vietnam. Lilly also worked for Ford Aerospace and Communications.

After hours, Lilly lead a spirited bowling team in the Yellow Jacket Bowling League. "Lloyd's Lillies" won the league championship in 1987. On March 8, the team bowled the highest team single-game scratch total in the 30-year history of the league — 804.

Lilly's colleagues good-naturedly teased him about his retirement and his approaching wedding.

"Lloyd has set a standard I'm not sure the rest of us will be able to live up to," Reedy noted. "He's the only man I know who announced his retirement and his engagement to be married on the same day."

Lilly and Cheryl Barnett (ELSYS) were married Sept. 23. Barnett prepared the food for Lilly's reception, as she has for many other GTRI honorees, and Dot Sadler helped with set-up.

In the GTRI tradition, Lilly's colleagues presented him a degree — a "Master's of Rental Property Research and Development, with a minor in EW Program Management." Among the skills the diploma credits Lilly with having developed are "re-

*Continued on page 7*

*Lloyd Lilly was joined by his family for his retirement reception. From left, daughter-in-law Suelin; son Bob Lilly, a Tech graduate and former GTRI employee; 3 1/2-year-old granddaughter Angelina, in Lilly's arms; and his fiancée (now wife), Cheryl Barnett Lilly (ELSYS). PHOTO BY LEA MCLEES*



## GTRI Greetings

Welcome to some of our newest employees.



Deborah Esslinger

### Ten Good Things We Know About Deborah I. Esslinger

1. She joined GTRI's Electronic Systems Laboratory as a Research Scientist I at the beginning of May.
2. She is working with the Concepts Analysis Division doing C++ programming on an operator model for a radar threat system.
3. Last June Debbie received her bachelor's degree summa cum laude in computer science from West Georgia College in Carrollton.
4. While at West Georgia, she was a member of the Phi Kappa Phi and Omicron Delta Kappa honor societies and the Kappa Mu Epsilon math honor society. She also received two scholarships.
5. A couple of years ago, while a college student, she spent the summer as an intern with GTRI.
6. She plans to start work toward an advanced degree before too long — possibly at Tech.
7. Debbie grew up in Carrollton and attended Carrollton High School, where she was in the band and the color guard and won numerous prizes and awards.
8. Her family still lives in Carrollton; her dad, Richard Ingle, also works for GTRI.
9. Last October Debbie married Bill Esslinger, who works in Atlanta as a credit analyst. The couple honeymooned on St. Lucia.
10. Debbie and Bill presently live in an apartment in Lawrenceville, and look forward to getting a house of their own.

### Ten Good Things We Know About Andy Bowers

1. He's in his first quarter as a co-op student with GTRI's Administrative Information Systems Team (AIST).
2. This fall he'll start his sophomore year at Georgia Tech.
3. His major is computer science.
4. This summer, Andy has been working on administrative planning software.



Elizabeth Bell



Andy Bowers

5. He says he is "doing a lot of learning" this quarter with AIST about developing software for Windows.
6. Andy hails from Augusta, Ga., where he attended Lakeside High School.
7. He spent much of his spare time in high school as a member of the rowing team.
8. Not too surprisingly, Andy is also rowing here at Tech — as a member of the lightweight crew team.
9. He is also a member of Sigma Chi fraternity.
10. Andy is following in family footsteps: His grandfather, Cliff Bowers, attended Tech in the 1930s.

### Ten Good Things We Know About Elizabeth Bell

1. She joined GTRI's Administrative Information Systems Team in June as a Systems Analyst IV.
2. Her work is primarily database related: data modeling and database design.
3. In the future she will be doing database administration for AIST's development database.
4. A native of Little Rock, Ark., Elizabeth lived for 10 years in Connecticut, where she worked for Southern New England Telephone Co. in systems and database administration.
5. After a generous downsizing offer from the telephone company, she decided to return to the South.
6. Fond memories of Atlanta and her undergraduate years at Georgia Tech drew her back to this area.
7. She received a bachelor's degree in civil engineering from Tech in 1982.
8. She also earned a master's degree in computer and information science from the University of New Haven in 1990.
9. Elizabeth and her 3-year-old son, David, are living in a recently purchased "fixer-upper" near Emory University.
10. Her spare time? You guessed it — spent working on that fixer-upper.

## GTRI Graduates

Congratulations to the following folks on their recent educational achievements!

**Tim Anderson:** Doctorate, Industrial and Systems Engineering. Tim worked with Ron Bohlander (ITL). His dissertation topic was "Modeling Considerations in Data Envelopment" and his adviser was Dr. Gunter Sharp. He is now assistant professor of engineering management at Portland State University in Portland, Or.

**James Corbett:** Master's, Electrical Engineering. James, an RE I, works in ELSYS on systems software for radar warning receivers. James has worked full-time at GTRI while taking two graduate classes per quarter since 1993!

**Bob Lang:** Completed the Georgia Tech Management Institute in late July. The 12-week course met for three hours each Monday evening since April. Bob is director of the Research Security Department at GTRI.

**David Rodriguez:** Master's, Computer Science, with concentrations in computer animation and virtual reality. David, a GRA, works in ITL on the Falcon View project. He continues work on an M.S. in management at Tech, and plans to graduate in June 1996.

**Eyal Schwartz:** Master's, Computer Science. Eyal, a GRA, worked with ITL's John Gilmore and Fred Cox on projects in the neural network center/Artificial Intelligence Laboratory. He is working with Microsoft in the Windows NT group in Redmond, Wash., near Seattle.

**Giselle Welch:** Doctorate, Electrical and Computer Engineering. Giselle, a GRA, has worked with Allen Garrison and Ted Doll (EOEML). Her dissertation topic was "Application of coherence theory to enhanced backscatter and superresolving optical imaging systems," and her advisers were Bill Rhodes (EOEML/ECE) and Richard Kenan (ECE).

## Lilly

From page 6

search methods for getting edible food from vending machines, getting a good night's sleep on ERB furniture (he, Ed Reedy and technical monitor Charlie Ambuske were trapped on campus during a snow storm), and claiming seniority over Harold Engler because Lilly started work at GTRI one minute earlier. He is also credited with "buying a house to rent...buying two houses to rent...buying almost any house for sale."

ELSYS director Bud Sears presented Lilly with golf club head covers, a golf towel and a fishing rod on behalf of his colleagues.

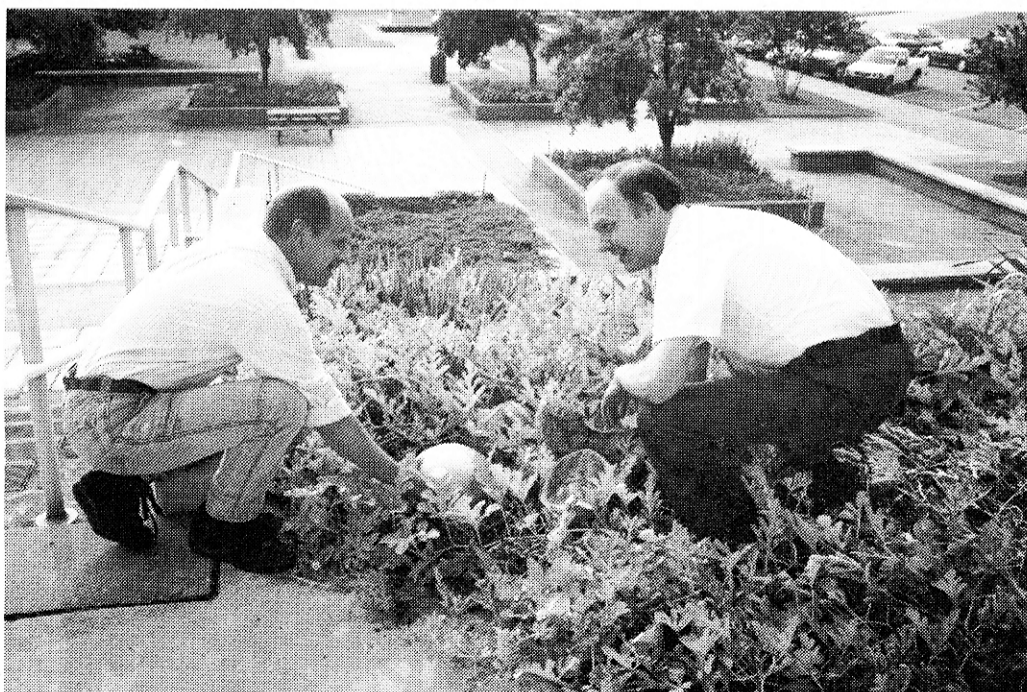
Lilly read a letter from Ambuske, who was for many years the government technical monitor for the EW Techniques Analysis program Lilly directed. Ambuske expressed pride in working with Lilly and seeing the EWTA program they collaborated on grow over the past 16 years.

"I've really enjoyed working with you," Lilly told those gathered to honor him. "It's been a great 20 years for me. I appreciate the support everyone has given me."

Lilly will continue to work part-time at GTRI. That will give him time to slip in some days of golf and fishing, as well as working on his rental houses.

## News & Notes

**Ray Kangas (RSD), left and David Hill, site supervisor with Advance Security, enjoy the season's reward in the CCRF watermelon patch, just outside Building 1. PHOTO COURTESY CAREY FLOYD**



## Focus on Folks

**Michael Kelly (ELSYS) talks with ten Georgia Tech freshmen who attended a "GTRI Overview" as part of their FASET orientation. Other GTRI employees participating included AERO graduate students Tim Hamel and Rob Stoker, and GTRI Director Richard Truly. PHOTO BY LEA MCLEES**

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## Professional Activities

### Electro-Optics, Environment and Materials Laboratory

The Emory/Georgia Tech Biomedical Technology Center has funded a project whose Tech representative is **Nile Hartman** — evanescent wave biosensor for real-time detection of DNA and RNA.

**Bill Kreiss** was appointed to the Quality Advisory Council of Underwriters Laboratory, Inc. in July. He will represent the aerospace industry on matters of quality control and assurance, and environmental systems management. Two international standards are of primary concern in these contexts: ISO 9000 and ISO 14000. Because DoD is considering adopting ISO 9000 to replace the MI Spec system it recently voided in favor of using COTS items, the matter is of some importance to GTRI, as well.

Kreiss attended an ISO 9000 seminar on Sept. 14 at the Advanced Technology Center, sponsored by Georgia Power and presented by Georgia Tech CISQ personnel. This executive overview updated managers on the rapidly growing global implementation of the ISO standards. A certificate of seminar completion was issued.

Kreiss also attended the Theater Missile Defense (TMD) meeting held at the Naval Post Graduate School in Monterey, Calif., July 31-August 3. He is aligned with a group of industry technologists under the San Diego firm RSDA, which has advanced the Wide Area Missile (WAM) concept. TMD addresses the threat of proliferating theater ballistic and cruise missiles.

Kreiss presented a paper at the AIAA 1995 Space Programs and Technology Conference held at the von Braun Civic Center in Huntsville, Ala., Sept. 26-28. His paper was entitled "Satellite Microwave Mesospheric Temperature Soundings - Mapping the Mesosphere," and was co-authored by two colleagues from GenCorp/Aerojet Electronic Systems in Azusa, Calif. The paper addressed design and implementation of an algorithm for obtaining atmospheric temperature profiles with satellite-borne microwave radiometers to heights of about 75 kilometers, where the Zeeman absorption line-splitting effect is pronounced. The upper stratosphere/middle mesosphere temperature sounder will be implemented as part of the DMSP Special Sensor Microwave Imager Sounder (SSMIS) being built by Aerojet, which will be launched by the U.S. Air Force in 1997.

**Cathy Clark** and **Eleish Lane** attended a Basic Waste Reduction Workshop Aug. 28-Sept. 1, presented by the Tennessee Valley Authority and the Waste Reduction Resource Center (EPA Regions III and IV). The course assists attendees in better assessing pollution and hazardous waste problems and solutions in industry.

**David Jacobi**, **Paul Schlumper** and **Jim Walsh** conducted a Sept. 19 seminar on OSHA and EPA/EPD regulations for industry in the Augusta area. This seminar, held jointly with the Georgia Power Tech-

nology Applications Center, was a function of the Georgia Manufacturing Extension Alliance.

**Bob Schwerzel** attended the Fourth International Conference on Advanced Materials in Cancun, Mexico, Aug. 27-31. He presented an invited lecture on "Nonlinear Optical Properties of Nanocomposite Polymers Containing Quantum-Dot Semiconductor Materials."

**Mikhail Belen'kii** attended the 1995 OSA Annual Meeting in Portland, Ore., Sept. 10-15 and presented two papers: "Effect of the Stratospheric Turbulence on the Full Aperture Tilt Measurement Technique with a Laser Guide Star" and "Atmospheric Modulation Transfer Function: Alternative Interpretation of the Measured Data."

**Claudia Huff** was one of three facilitators for Sept. 23 break-out sessions at the School of Electrical and Computer Engineering's faculty retreat. She worked with faculty exploring opportunities and issues associated with the professional education component of ECE's mission.

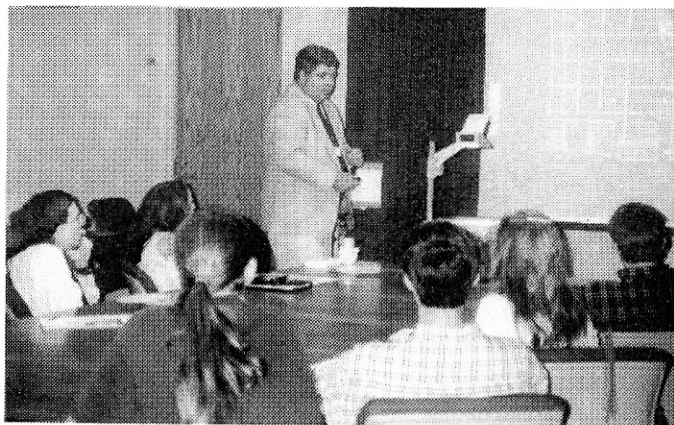
**Paul Middendorf** and **Paul Schlumper** presented several safety and health topics at the Sept. 27 General Overview of Safety and Health course in Fayetteville, sponsored by the American Association of Occupational Health Nurses. On Aug. 23-24, Middendorf presented the National Pro Bono Committee's perspective on educating small businesses in safety and health at the NIOSH-sponsored 'train the trainer' course for the Minority Health Foundation. Middendorf and Scott Brueck participated in the Agricultural Safety and Health Summit Meeting on September 1 to discuss agriculture's current status in Georgia, and how to address the state's agricultural needs.

**Steve Hays** and **Kirk Mahan** conducted two construction safety courses under a demonstration project with the U.S. Department of Labor. Both offerings, one in Savannah and one in Atlanta, were well attended.

**Mike Lowish**, **Steve Hays**, **Paul Schlumper** and **Kirk Mahan** conducted an OSHA Compliance Safety Course for Georgia Pacific in Jackson, Miss. Mahan provided training to Mississippi's OSHA Consultation Program regarding construction safety audits and OSHA compliance procedures. Special emphasis was given to contractors working in correctional facilities and mental institutions.

**Dan Ortiz**, **Kirk Mahan**, **Steve Hays**, **Mike Lowish**, **Cathy Clark**, **David Jacobi** and **Myrtle Turner-Sippio** conducted a Trainer Course in Safety and Health Standards for United Parcel Service.

**Lisa Detter-Hoskin** contributed a chapter, "Secondary Ion Mass Spectrometry" in a newly-published book entitled *Surface Analysis of Paper*, edited by Terrance Connors and Sujit Banerjee. The book is a collection of experiences from researchers



who use analytical tools in the paper, chemicals and related industries to solve a range of problems. The book is now available from CRC Press, Inc.

**Paul Wine** attended the national American Chemical Society Meeting in Chicago in late August. He chaired a session in a symposium on chemical kinetics in environmental systems; presented an invited paper in the same symposium ("Laboratory Studies of Weakly Bound Adducts of Atmospheric Interest," co-authored by **Mike Nicovich**, **Bob Stickel** and former EOEML employee Tony Hynes); presented a contributed paper in a symposium on Mechanistic Environmental Photochemistry ("Kinetics Studies of the Aqueous Phase Reactions of Sulfate Radicals with Halogen-Substituted Acetic Acids," co-authored by **Mike Nicovich**, **Alina Nix** and **Danielle LaGerda**); and participated in *Journal of Physical Chemistry* board meetings.

### Electronic Systems Laboratory

**Richard Ingle** presented "Architecture of a Simulator for Research in Advanced Traffic Management System Design" at the European Simulation Congress (EUROSIM'95) in Vienna, Austria, Sept. 11-15.

## Personnel News

### New Responsibilities

**Trent Farill** has been named EOEML director.

### Retirement

**Lloyd Lilly** (ELSYS) has retired from full-time work.

### New Hires

EOEML welcomes **Bill Anderson**, GRA; and **David Marshall**, Graduate Assistant; AERO welcomes **Robert Funk**, GRA; ELSYS welcomes **Kimberly Martin**, Temp Student Assistant; HRO welcomes **Ronald Neely**, Temp Student Assistant.

### Moving On

**Kysha Rowe**, **David Balcom** and **Wayne Ohlinger** (EOEML); **Erik Dreyer** and **Betty Pope** (AERO); **Alyne Heller**, **Edward Masters** and **Edward Soniat du Fossat** (ELSYS); **Walker Hubbs** and **Shannon Lytle** (PST); **Eric Myers** (SEAL); **Eric Taylor** (SSD); and **Robert Young** (HRO) are moving on.

### Transfers

**Keith Hughes** (FSD) has transferred to MARC.