

the GTRI connector

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EES Anniversary Party Big Success

Approximately 500 people helped celebrate the end of 50 years of operation of the Engineering Experiment Station on September 28, as EES readied itself to assume its new identity as the Georgia Tech Research Institute on October 1.

Four former EES directors and a number of retirees returned to the campus to spark the celebration with a session of reminiscences in the Architecture Building auditorium. Dr. Donald J. Grace presided. Former directors participating were Prof. Harry Vaughan, Dr. Herschel Cudd, Dr. James Boyd, Dr. Maurice Long, and Dr. Thomas Stelson (acting).

The directors and their wives also were given a campus tour and honored at a VIP luncheon to which employees with 25 years or more of service at EES were in-

cluded. The day was climaxed with a giant birthday party complete with balloons, champagne, numerous hors d'oeuvres, and two birthday cakes.

A popular feature of the reception was a pictorial walk down memory lane via 137 pictures from the archives. John Brown won the contest to see who could identify the most pictures. His prize was a bottle of champagne.

GTRI hosted the pre-game luncheon on Saturday, and the directors were introduced from the field at the Clemson game.

The Research Communications Office was in charge of the events. Mary Ann Burke orchestrated the extravaganza, and Jerry Webb mounted the photo display.



EES directors and their wives pause between events celebrating the Station's 50 golden years. From left to right, they are: (back row) Dr. Herschel Cudd, Dr. James Boyd, Dr. Thomas Stelson, Dr. Maurice Long; (front row) Mrs. Maxine Cudd, Mrs. Betty Boyd, Prof. Harry Vaughan, Mrs. Gladys Rosselot, Mrs. Joan Grace, Dr. Donald Grace. Present at the ceremonies but missing from the picture are Mrs. Nancy Vaughan, Mrs. Beverly Long, and Mrs. Connie Stelson. Mrs. Rosselot is the widow of former EES Director Gerald Rosselot.

EES Directors

1934-1940	Mr. W. Harry Vaughan
1940-1941	Dr. Harold Bunger (Acting)
1941-1952	Dr. Gerald A. Rosselot
1952-1954	Dr. Herschel H. Cudd
1954-1957	Dr. Paul Calaway
1957-1961	Dr. James E. Boyd
1961-1963	Mr. Robert E. Stiemke
1963-1968	Dr. Wyatt C. Whitley
1968-1975	Dr. Maurice W. Long
1975-1976	Dr. Thomas E. Stelson (Acting)
1976-1984	Dr. Donald J. Grace

Field Offices Are Dedicated

Three of Georgia Tech's four new industrial extension field offices were dedicated earlier this month with public ceremonies and open house receptions.

GTRI Director Donald J. Grace was on hand for the dedications in Madison and Brunswick on October 2 and 4, and Associate Vice President for Research Albert Sheppard attended the Columbus dedication on October 9. They presented plaques of appreciation to key legislators who were instrumental in getting state funding for the new offices: Rep. Roy Lambert of Madison, Sen. Glenn Bryant of Hinesville, Sen. Joe Kennedy of Claxton, and Rep. Tom Buck of Columbus.

Resident engineer Ned Ellington will serve an 11-county area of middle Georgia from the Madison office. George Rivers

will handle eight southeast Georgia counties from the Brunswick office, and John Mills will be responsible for nine counties in the southwestern area around Columbus.

"With 12 offices instead of eight, each office will serve a smaller area. We expect this to make our system even more efficient than it has been in the past," said Richard Combes, director of the field office system.

He pointed out that even with fewer people to cover the state, the system has been a highly effective investment for Georgia. "For each dollar appropriated for the program by the state, extension engineers have been able to help small - to medium-sized companies stimulate \$20 of improved productivity," he said.

GTRI Makes Perfect Score

The Georgia Tech Research Institute has logged a superlative accomplishment in Department of Defense circles—it has passed its semiannual research security inspection with **no cited deficiencies**.

"Not only is this the first time this has happened at Georgia Tech, it is also an extremely rare occurrence among all government contractors," said Research Security Coordinator Al Becker.

The accomplishment is even more remarkable in light of the fact that Georgia Tech is one of the largest facilities of the 14,500 in the United States that deal with classified information. GTRI's Research Security Department currently is monitoring classified contracts budgeted in excess of \$60 million. In FY 1984, its personnel processed 3,275 visit requests and thousands of documents.

"No examination is more exhaustive than this one," Becker said. "Teams of experts from the Defense Investigative Service of the DOD Directorate of Industrial Security come twice a year to examine in exquisite detail everything we do. In September, a total of five people spent seven working days actually tracing our entire control and classification management process from the time a document is created through every step of its handling.

"They fanned out into the research units and interviewed employees at every level in detail.

For example, they examined operators of 20 of the 42 word processors used to type classified documents on their knowledge of proper procedure."

Becker noted that his staff performed a 100% internal audit prior to the inspection, a process that took five months. They also rebriefed 95% of GTRI employees to refresh them on security procedures. "But our superior rating is a tribute to the diligence of the research laboratory personnel who underwent the ordeal," he said.

"Although I believe my office has the best security team in the country, we are professionals doing our job. The people who were inspected deserve the credit."

Becker stressed that a good security record is an important factor in the awarding of classified contracts. With Department of Defense contracts currently accounting for 64% of GTRI sponsored research, GTRI has reached a security performance level which should further enhance its ability to capture contracts.

Research Security staff members in addition to Becker are Jerry Bryson, assistant research security coordinator; Edward Gilmore, administrative assistant; Alice Eales, document control specialist; Alice Turner and Paula Wilcox, security specialists; and Sandi Keesler, clerk II.

Expanded Training Program Offers Wide Choice

From "Meetings, Bloody Meetings," a lighthearted film on planning and conducting better meetings, to a seminar on "Strategies for Winning Worthwhile Research Projects," GTRI's Training and Staff Development Program is offering a wide variety of training activities for the entire spectrum of employees.

Early this year, Dr. Neil Hilsen was assigned to the Office of the Director senior staff primarily to direct a more coordinated and focused effort in training and staff development. He and Bob Collier are responsible for management and research staff training and development programs. Jean Fuller plans and administers the support staff training activities.

Training Goals/Approaches

"The purpose of the Training and Staff Development Program is to improve the overall quality and efficiency of the research activities by developing and maintaining a high level of instructional and professional development opportunities," Hilsen says. "The intent is to give all full-time personnel opportunities to improve their on-the-job performance, and thus strengthen the qualifications and reputation of Georgia Tech."

To carry out this purpose, the program staff pursues several approaches. They conduct surveys to determine assessed needs of the GTRI staff; they present training programs that have been developed in-house; they bring in outside experts to conduct relevant seminars; they coordinate with other elements at Georgia Tech that offer staff development programs; they investigate other training resources and inform GTRI employees of their availability; and they help develop and externally market technical short courses.

The wide variety of programs and activities that are offered falls into two categories: training and staff development. The train-

ing programs are designed to improve specific job-related performance. Staff development activities enhance general overall performance and provide opportunities for advancement.

Management Training for Research Staff

For the past several years, Bob Collier has been coordinating introductory seminars on project management and contract development. A total of 251 persons have attended the ten sessions of the project management seminar offered to date, and another session is being offered October 17. The six sessions of the marketing seminar presented so far have had a total of 134 participants. It will be repeated on December 12.

Instruction has been conducted by staff members from several laboratories, service groups, and the Office of Contract Administration (OCA). "These voluntary efforts have been critically important to the success of the program," Hilsen said.

Other activities have included a seminar / workshop concerning interface between GTRI and OCA, and arrangements for specialized consultant training. For example, 80 research personnel have attended seminars on marketing and contract development presented by Dick Close.

Then there's the monthly series of professionally produced training films. Topics covered so far include motivation, time management, the conduct of meetings, communication and cooperation.

According to Dr. Hilsen, high-priority programs currently being developed include an advanced project management seminar / workshop and an advanced marketing seminar, as well as revision of the *Manual for Project Directors*. Also under consideration is a general management seminar that will set forth GTRI management philosophy. "The laboratory directors are playing a

key role in the formulation and implementation of these expanded training activities," Hilsen said.

Support Staff Training

On-the-job training has been provided to the support staff mainly in the areas of personnel, accounting, procurement and property management. Training modules have been developed for several of these areas, and others are in progress.

Jean Fuller is basing her staff development planning on the results of a needs assessment survey of the support staff. The survey revealed educational assistance as the No. 1 need, with 82% of the 171 respondents saying it was definitely needed or desirable. A detailed survey of specific educational needs and the status of individuals currently pursuing degrees elicited a 65% response, with 160 people stating that they would participate if a tuition reimbursement program were initiated. The results have been turned over to the GOLD Task Force to support their efforts to obtain educational assistance for classified personnel at Georgia Tech.

Other staff development activities also are in progress. A

seminar on "Group Leadership Techniques" was taught by Mack Davis of TAL's Industrial Education Department in May and September. Courses on time management and verbal and written communication skills are being offered this fall.

High-priority activities for the near future include completing a training manual for each service group, providing additional training in human relations skills, and adding technical skills training.

Plans for the Future

Hilsen, Collier and Fuller have developed a comprehensive long-range plan to strengthen the training program. They are putting together a small library of training-related materials. They are evaluating the HEMI/GOLD series of videotape management training programs. They are querying lab directors as to interest in seminars on topics like time and stress management and team building. They want to build a computer data base to track the progress of each employee in the training and development area. They want to expand the availability of video-based programs and instructional courses. They also have another dozen or so ideas on their list.



Patricia Stone

The Group Leadership Techniques seminar gives participants an opportunity to learn by role playing. At the September session, Nadine Johnson (standing) gets practice in leading a meeting. To her left are Kristin Turgeon, Jean Fuller (training coordinator), Brenda Hill, and Sandy Alford. To her right are Lois Nelson, Mack Davis (instructor), Gwen Barkley, and Bert Watkins.

STAFF ACTIVITIES

ECONOMIC DEVELOPMENT LAB

Holly Grell was a panelist on "Life after the M.Ln.: The First Years" at the Fall Colloquium Series of Emory University's Division of Library and Information Management on September 5.

Environmental Health & Safety Division: **William Spain** helped plan the Southeastern Occupational Health Conference, which was held September 6-8 in Atlanta. He presented a pre-conference workshop on "OSHA Injury and Illness Record-keeping" and directed the Industrial Hygiene and Safety Program. **John Nemeth** spoke on "Safety Planning at Hazardous Waste Sites and Facilities." An invited article by Nemeth, "It's Time to Get Serious about Hazardous Wastes," appeared in the September 2 *Atlanta Journal & Constitution*.

ELECTROMAGNETICS LAB

EML has started having monthly seminars to brief its staff on specific areas of lab research. The October 25 session will feature **Andy Splessbach** on artificial intelligence and **Mark Strickland** (Huntsville) on a compartmented program supported by GTRI.

ELECTRONICS & COMPUTER SYSTEMS LAB

A paper by **Vic Tripp** entitled "A New Approach to the Analysis of Random Errors in Aperture Antennas" was published in the August issue of *IEEE Transactions on Antennas and Propagation*.

Ed Shanahan, Roy Miller, and Lisa Allen presented papers and gave demonstrations at the recent Simulation and War Games short course led by Prof. L. G. Callahan of ISyE.

This month, **John Mantovani** will present a paper, "A Spherical Dipole Source for Use as a Transfer Standard Between Radiated Emission Test Sites," at the IEEE Electromagnetic Compatibility Symposium in Tokyo. **Don Clark** will attend the board of directors' meeting as secretary.

Barry Cown has moved to France for nine months to pursue research on modulated scattering techniques for antenna measurements and microwave imaging at the Ecole Supérieure d'Electricité.

ENERGY & MATERIALS SCIENCES LAB

Ron Jackson received a commendation from the Board of Regents for his special services in processing asbestos abatement air samples from a dormitory at Albany State College on an emergency basis.

SYSTEMS & TECHNIQUES LAB

At the Conference on Precision Electromagnetic Measurements held at Delft University of Technology in

Holland the week of August 20, **Don Bodnar** presented a paper on "Precision Differential-Polarization Measurements" and **Larry Corey** presented a paper entitled "An Efficient Planar Near-Field Measurement Technique Using Hexagonally Periodic Transformations."

SYSTEMS ENGINEERING LAB

An article by **John Bordelon**, "Complex Arithmetic on HP-11C," was published in the September/October issue of *R.F. Design*.

TECHNOLOGY APPLICATIONS LAB

Tom McGowan went to Washington, DC, on October 1 to receive a National Award for Energy Innovation from the U.S. Department of Energy for his homebuilder's energy efficient construction project.

Carol Aton and Claudia Huff presented "Production Roulette" to a group of writers and programmers at Wang Laboratories in Boston on August 27.



Atlanta IEEE Hosts Meeting

The 1984 Global Communications Conference (GLOBECOM '84) is coming to Atlanta next month, bringing with it more than 1,500 attendees from 18 countries.

Playing key roles in making this major conference possible are several members of the Electronics and Computer Systems Lab (ECSL), particularly the Communications Systems Division. Division Chief Richard Moss is chairman of the Technical Program Committee, while Robert Rice is vice chairman for sessions and Leslie Pickering is vice chairman for papers. Other Division members on the committee are Bill Butler and Andre Lovas.

"The conference will feature 48 technical sessions covering 15 areas of interest from ultrahigh capacity optical technology to control of the quality of complex communications systems," Moss said. "An innovative addition to the program this year is the concept of a mini-theme, composed of a tutorial and a sequence of technical sessions and panel discussions that highlight an important area of current interest in

the communications field. The GLOBECOM '84 mini-themes are Quality Assurance Management and Optical Communications."

More than 300 papers will be presented at the conference, titled "Communications in the Information Age." The site is the Atlanta Hilton Hotel, and the dates are November 26-29.

Dr. Richard J. Gowen, president of the Institute of Electrical and Electronics Engineers (IEEE), will be the keynote speaker at the awards luncheon. The banquet speaker will be Nobel Prize winner for Physics Dr. Arno A. Penzias, who is vice president of research at AT&T Bell Laboratories.

GLOBECOM '84 sponsors are the IEEE Communications Society and the IEEE Atlanta Section. Both Moss and Jim Toler (ECSL) are on the GLOBECOM Executive Committee, and GTRI Director Donald Grace is on its Executive Advisory Board. Ron Seaman (ECSL) is chairman of the IEEE Atlanta Section; Donald Clark (ECSL) is vice chairman, and Jim Wiltse (OOD) is secretary.

RAIL Celebrates BUOY Awards

RAIL staff and guests recently celebrated once again the presentation of the famous BUOY award with a ceremony honoring the winners for field operations undertaken in 1982 and 1983. The celebration, held at the Cobb County facility auditorium, provided an entertaining sharing of field operation, "war stories."

Candidates were given the privilege of describing the tribulations that were overcome, the personal trials and triumphs, and other noteworthy events. The sole requirement for candidacy, however, is that the field operation had to result in bringing home at least one "almost repeatable set of data."

The BUOY award winner for 1982 was Ted Lane, commemorating the Westinghouse target backscatter exercise at Eglin Air Force Base. More noteworthy features of this field operation included the drop-testing of the millimeter wave radar, the computer controlled observation of a military target taking an hour to rotate a full circle, learning the fine art of turkey calling, and post-measurement wind-downs at local watering holes. Ted was the successful lead engineer on this program, one to which he was assigned without any prior participation

during the planning, proposal and negotiation phases.

Nick Currie won the 1983 BUOY award for his fearless performance measuring sea ice reflectivity at Baffin Island, in the arctic region of Canada. Nick's crew spent eight weeks living together in a plywood shack with rudimentary restroom facilities, but no bath facilities. Subzero temperatures required removing ice from inside the waveguide. Drinking water was obtained only by melting glacier ice, and rifles were required in case the local bear population got too friendly or too hungry! Nick and his cohorts learned to appreciate the luxuries of home, the wonders of travel to far-off places, and the machinery of successfully passing through Canadian Customs.

Dr. Ed Reedy, RAIL's director, said he is especially proud of the laboratory's successful completion of these field operations that yielded new, exciting research information and provided increased worldwide exposure of Georgia Tech's research capabilities in the field of radar technology. He added, "We all look forward to next year's BUOY award ceremony, for which deserving candidates have already been identified!"

RESEARCH BRIEFS

(Note: This column is in response to reader requests for a regular feature on notable contract awards. You are invited to submit brief, one-paragraph descriptions of new or renewed projects that are significant because of size, important results, uniqueness, or special interest.)

The U.S. Environmental Protection Agency has refunded and expanded the on-site hazardous waste consultation pilot program initiated a year ago by the **Environmental Health and Safety Division** of the Economic Development Lab. The increase from \$75,000 the first year to \$200,000 this year will enable EDL to help EPA expand the successful program to other states in addition to stepping up the volume of assistance to Georgia firms. The program helps small firms comply with new, more stringent hazardous waste management regulations. John Nemeth is the project director.

Joe Seals of the Electronics and Computer System Lab's **Biomedical Research Division** has received funding for two programs to develop electromagnetic devices to measure respiratory and heart rates in humans without direct contact. A \$196,736 award from the Office of Naval Research is for the third year of a program to develop a device that will be effective at distances of hundreds of feet, and thus requires frequencies in the gigahertz range, sophisticated processes, and expensive equipment. A new \$50,000 program for the Air Force will focus on a much shorter range (5-15 feet) and frequencies in the low microwave part of the spectrum.

Also in the **Biomedical Research Division**, Jim Toler received a \$90,000 increment for continuation of his long-term study of the bioeffects of microwaves on rats. He will be exposing a small population of rats to gradually increasing doses of microwave energy to determine the threshold levels at which certain bioeffects occur.

Hormone and blood effects are monitored by means of cannulas or tubes permanently inserted in the rats' bodies. The Air Force School of Aerospace Medicine sponsors the program, which is done in collaboration with Emory University.

The **Systems and Techniques Lab (STL)** has just received a new contract with the Air Force's Foreign Technology Division (FTD) for study of advanced radar systems. The program is budgeted for \$450,000 the first year, with options for two more years. It continues a decade-long relationship which STL has had with FTD, providing specialized analysis on a variety of task assignments. Berry Pyron is project director.

STL also recently received a \$1-million contract from the U.S. Army Electronic Proving Grounds at Ft. Huachuca, AZ, for a major upgrade of their antenna ranges. This multi-year contract has several options and is fully funded at a potential value of several million dollars. One option calls for design, fabrication and installation of a very large "compact range" capable of measuring antennas on full-size vehicles including tanks and helicopters. Larry Corey is project director.

The Air Force Ballistic Missile Office has just funded continuation of the **Technology Applications Lab's** study of the feasibility of using heat pipes to dissipate waste heat in bases located deep underground. Bo Hendrix, is co-principal investigator with Dr. Gene Colwell of the School of Mechanical Engineering. In this \$171,268 phase, they will investigate using heat pipes for pre-attack cooling of the surrounding rock so that it will be a better medium for dumping waste heat during the post-attack "button up" period. They also will perform more parametric studies on heat pipe design and operation and on the waste removal system, look at the details of installation, and do preliminary test planning for validation of the system.



Master of Ceremonies Bob Trebits (left) presents RAIL'S BUOY trophy to winners Nick Currie (center) and Ted Lane (right).



GEORGIA TECH RESEARCH INSTITUTE

New Logo Reflects GTRI Image

GTRI is . . . forward-looking . . . modern and contemporary . . . innovative . . . involved with high technology engineering R&D . . . and integrally linked to Georgia Tech.

GTRI's new logo incorporates these attributes, which are considered by OOD and lab directors to be important to the image of our organization.

The avant-garde typeface of the logo was custom designed by a graphic arts firm in Atlanta which specializes in corporate logo development. No other organization in the world uses this typeface or letter configuration. Thus, action is being taken to register the logo as a legally protected trademark. As a registered trademark, the logo can never be altered in any way.

"The logo is the basis of a new organizational identity program for GTRI, and standardized use is important to promote our new image."

Don Grace
GTRI Director

"We are very proud of our new logo and I encourage all staff members to use it, whenever possible, on our promotional and research materials," says GTRI Director

Don Grace. "The logo is the basis of a new organizational identity program for us, and standardized use is important to promote our new image. In the near future, we will distribute logo reproduction sheets and guidelines for using the new logo in many graphic applications. We urge all staff members to follow these guidelines to ensure the success of this important public relations program."

In explaining the logo design, Jackie Erney of the Research Communications Of-

fice says, "The letters are slanted forward to give a look of momentum toward the future. The descender on the 'R' is dropped below the other letters as an innovative design element and to emphasize the research aspect of the organization. Spatial arrangements between the letters are crafted to look like a precision engineering design. The 'GT' and the 'RI' are connected at the top to show the integral link between GTRI and Georgia Tech. And, the official color for the logo is gold —

another element which clearly connects GTRI with Georgia Tech."

Many designs were considered during the development of the logo by Erney and Neil Hilsen, OOD senior staff member. Of the 20 designs presented by the graphic design firm, their logo was selected because it met specific criteria for a new organizational image for GTRI. An opinion survey among OOD directors, senior staff and lab directors served as the basis for the logo design.

New Materials Feature Coordinated Design, Color Scheme

Early in the process of developing the new organizational identity program, management determined that it also was very important to promote GTRI as a businesslike, well-established research institute. These attributes are incorporated in the design of GTRI's new standardized external communications materials.

Samples of the new materials are shown on the next page of *The Connector*. New letterheads and envelopes are scheduled for delivery to the warehouse between October 25 and November 15. All business cards will be delivered between November 1 and December 1.

A consistent design theme

was developed for the new materials to achieve a coordinated, fairly corporate look in which the new logo and GTRI name are prominent elements.

The letterhead design is avant garde, yet looks conservative and organized. It is practical as well, providing a standardized space in the upper right corner for units to imprint custom information, as shown in the sample on the next page. The basic letterhead design is carried through on the new envelopes, business cards, mailing labels and memo pads.

Although printed on the facing page in black and white, the actual materials will be very colorful. The logo will be printed in gold, with all other supporting type in a dark blue

on a creme colored paper. This standardized color scheme will appear on all letterhead, envelopes and business cards. Memo pads and mailing labels will be printed in a coordinating blue ink. GTRI units also will be able to order large mailing envelopes and second sheets matching the letterhead paper from the GTRI warehouse.

"Through consistent use of these standardized materials, we will communicate that GTRI is a modern and innovative organization . . . an outfit of essential strength and unity," says Director Don Grace. "We are proud of these materials and expect all units to use them so that we may work toward maximum recognition for GTRI among our external audiences."

Guidelines for Using the New Materials . . .

One of the most important aspects of any organizational identity program is uniformity in graphic communications.

In a large organization like GTRI, this is virtually impossible to achieve unless every employee follows prescribed practices for using the new logo and external communications materials.

To ensure the success of GTRI's new organizational identity program, RCO is preparing a manual which sets forth necessary guidelines for using the new logo in as many

print and audiovisual applications as possible. Guidelines for imprinting new standardized stationery materials will be included as well. The manual and camera-ready logo reproduction sheets will be distributed as soon as possible.

In the meantime, until these materials are printed, all employees are urged to follow these interim guidelines:

- Do not alter, redraw or add to the logo under any circumstances.
- Photostatic copies of the

authorized logo and the signature type (for the spelled-out words "Georgia Tech Research Institute") can be ordered from the GIT Printing & Photographic Center.

- Always use a photostat of the logo and signature type; never use a xerox or any other kind of copy for print or AV production.

- When used together, the new signature type should be placed under the logo in the position shown at the top of the preceding page of *The Connector*.

- The logo can be reduced or enlarged to any appropriate size. However, it always should be surrounded by as much space as possible.

- Please do not imprint your letterheads or envelopes with custom information until the manual is completed, as all imprinted information must be in a specific size, typestyle, position and ink color.

- Try to use the new logo and signature type as often as possible.

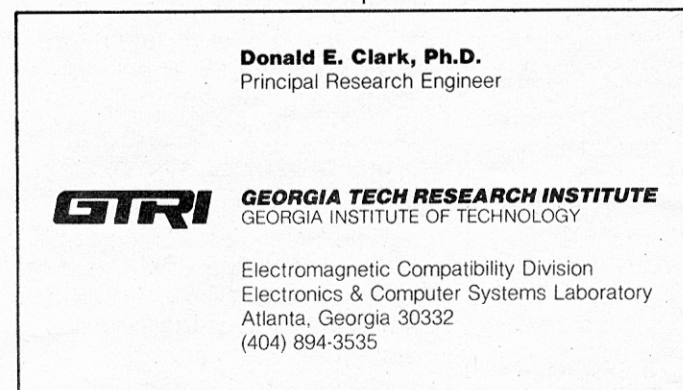
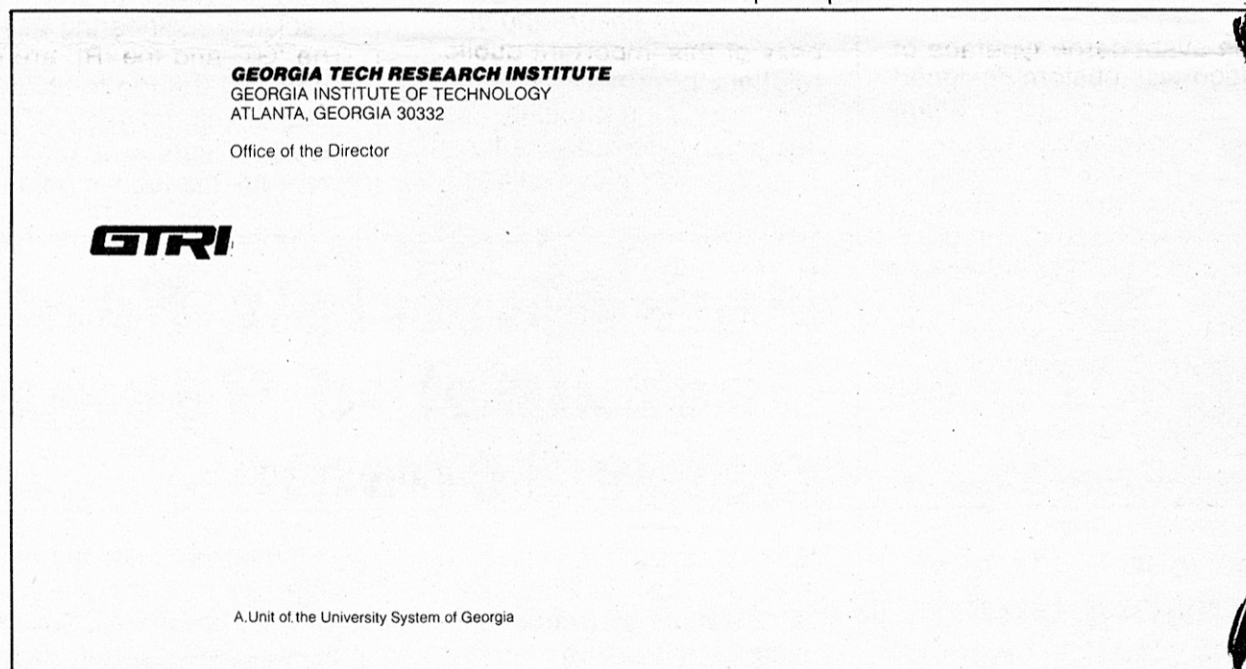
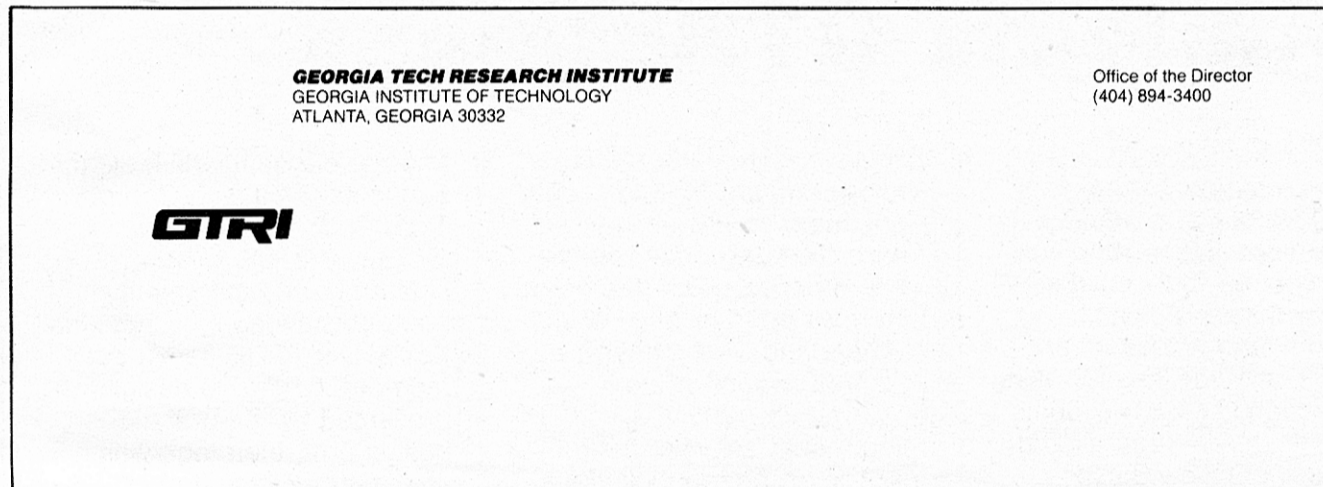
- Review all existing print and AV materials which will continue to be used and substitute in all instances:

- The new GTRI logo for the old logo.

- The words "Georgia Tech Research Institute" for "Engineering Experiment Station."

- The words "Research Institute" for "Station."

Illustrated on this page are reduced samples of the letterhead and envelope and a full-size business card.



Georgia Institute of Technology is an equal education/employment opportunity institution of the University System of Georgia. Georgia Tech Research Institute formerly was the Engineering Experiment Station.

Former Directors Swap Stories

"Age is not important unless you are a cheese." So goes one of the famous sayings of former EES Director Dr. James E. Boyd. And if their performance at the 50th anniversary story-swapping session was any indication, the former EES directors have aged well indeed.

Leading off with a great deal of verve and wit was Professor W. Harry Vaughan (1934-1940), who concurrently was the first director of EES and the director of the Ceramic Engineering Department. Under his leadership, EES developed the first rayon of Georgia pine pulp, as well as cotton roving and spinning processes that were three to five times as fast as those that were current in industry. He reminded the audience that "research is building knowledge for the future." Vaughan left Tech for the Tennessee Valley Authority.

Next was Dr. Herschel H. Cudd (1952-1954). He told about solving the potato chip industry's shelf spoilage / rancidity problem by inventing the silica gel / activated carbon packet which is still in use today. Dr. Cudd went onto become vice president for research and development at American Viscose Corp., president of Avisun Corp. and Amoco

Chemicals Corp., and senior vice president of Standard Oil (Ind.).

Dr. James E. Boyd (1957-1961) described starting EES's microwave propagation and radar research in the 1940's in cooperation with Dr. Gerald Rosselot, who was EES director from 1941 to 1952. After a decade as president of West Georgia College in 1961-1971, he served the University System as vice chancellor for academic development until his retirement in 1974. He returned to Tech in 1971-1972 as acting president.

Dr. Maurice W. Long (1968-1975) stressed the importance of EES's contributions to students. Long, who received three degrees from Georgia Tech, started as a student assistant at EES after World War II and was in on the ground floor of research in antennas and propagation. He rapidly rose through the ranks to head the Radar Branch, to organize the Electronics Division, and then to direct the entire Station. He said he owed his first job to his and Dr. Rosselot's mutual interest in ham radio.

Dr. Thomas E. Stelson, who as vice president for research was acting director of EES in 1975-1976, closed the formal part

of the program with comments on the advantages of combining a research institute with a university. During his tenure as head of the Civil Engineering Department at Carnegie Tech, he was successful in arranging the marriage of that university with the Mellon Institute for Industrial Research, to the mutual advantage of all concerned.

The last director of EES, Dr. Donald J. Grace (1976-1984), then threw the meeting open to more sharing from the audience. First up was John Brown (EMSL, retired). He chided Dr. Boyd for not responding to his and Dr. LeRoy Woodward's memo of June 6, 1951, requesting a water chiller for the electron microscope room. Dr. Boyd's reply: "I can't recall throwing cold water on any proposal!"

Glen Robinson, a member of the Georgia Tech Research Corp. board and a distinguished Georgia Tech alumnus, summed up his career as an EES employee as follows: "There were two key people in my life — one hired me, one fired me, and they are both sitting on this platform." When Dr. Boyd and Dr. Rosselot founded Scientific Atlanta, EES's first and most famous spin-off industry, Dr. Boyd hired

Robinson, who had worked at EES during his student days, to work half time at EES while serving as general manager at SA. When a controversy arose re conflict of interest, Dr. Cudd wrote Robinson a letter giving him the choice of working full time either at EES or SA. Robinson chose SA and the rest is history.

Rudy Yobs (OOD, retired) had several stories to tell, among them the little-known fact that EES once owned a buffalo. This unique gift was donated by a northwest Georgia farmer in gratitude for the work of the first field office, which opened in Rome in 1961. The problem of what to do with the buffalo was solved when Columbus, Georgia, started a zoo and took it off Tech's hands. Yobs also described Dr. Boyd's admirable self-discipline as "a person who could eat one salted peanut and stop."

Retired Research Property Management head Charles Smith remembered his pleasant days at Tech, and Conrad Meaders (STL) recalled the annual EES Christmas lunch in the 1960s to which families were invited. Bob Kyle (TAL) remembered the 1950s as a time when EES's work ran the gamut from freezing strawberries to designing brassieres.



Three of last year's Research Awards winners are honored by these large plaques hanging in the lobby of Building No. 1 at the Cobb County Research Facility.

Judging Under Way for Awards

GTRI employees may have noticed 14 large wooden plaques which recently went on display in seven GTRI buildings. Each features a large color photograph of an employee who was honored last year for his or her outstanding contributions to research. The name of the employee is engraved on a brass plate, and the plaque is hung in the area where the honoree works.

The GTRI Annual Research Awards Committee currently is sifting through the nominations for the second annual research awards to select the winners whose names and portraits will go on the plaques this year. The 14 awards will publicly recognize individual GTRI staff members for their contributions to research at GTRI.

The committee is appointed each year by the Office of the Director, GTRI. This year, Kathryn Logan (EMSL) is chairing the committee, and the members are Al Becker (Security), Bill Howard (OOD), Virginia Jory (STL), Roy Miller (ECSL), and "Dusty" Rhodes (SEL). Their responsibilities include soliciting and reviewing nominations, selecting award recipients, and planning and conducting a reception for presenting the awards.

Outstanding performance awards will be given in the following categories:

Research: electronics labs, 2 awards; resources labs, 1.

Program Development: electronics labs, 2 awards, resources labs, 1.

Only individuals in positions no

Some Significant EES Milestones

1919: Legislature creates State Engineering Experiment Station.

1934: EES actually begins research, principally in textiles, ceramics, helicopter engineering.

1939: First wing of Hinman Building erected.

1946: Georgia Tech Research Institute begins as EES contract organization. First major funding from federal agencies.

1948: First radar project starts, grows rapidly into major program. Electron microscope studies of kaolin begin (longest continuing EES project).

1951: Full-time employment reaches 186, topping 100 for first time.

1952: Annual budget passes \$1-million mark.

1950s & 1960s: Significant growth, particularly in R&D projects for defense and space exploration.

Late 1950s: Slip-cast fused silica techniques for forming large refractories developed, thus beginning internationally recognized high-temperature materials research.

1955: Rich Electronic Computer Center opened by EES.

1956: EES pioneers in methodology of economic development.

1959: EES erect Radioisotopes & Bioengineering Lab, the first component of what is now Emerson Building. Electronics Division created with emphasis on communications and radar.

1960: Charter broadened to en-

compass economic development and add industrial extension service.

1961: First of statewide system of field offices opens in Rome, GA.

1962: Nuclear Research Center established by EES.

1964: International development programs started.

1966: Electronics Research Building completed.

1969: Baker Building completed.

1970s: EES pioneers in solar energy, biomass, and other alternative energy sources, including conservation. Nationally recognized leader in near-field antenna research, threat radar systems, millimeter wave technology, and defense electronics.

1975: Legislature designates EES as the Georgia Productivity Center.

1975-83: Rapid growth and expansion at rates of up to 30% a year.

1976: Budget tops \$10 million.

1977: Solar thermal test facility opens as second largest of its kind in the nation.

1978: Full-time employees exceed 500. Electronics research expands to 4-building complex in Cobb County.

1980: Advanced Technology Development Center created with major assistance from EES.

1983: Budget exceeds \$50 million. Georgia Scientific & Technical Research Foundation buys Cobb County complex and breaks ground for Research Building on campus.

1984: EES changes name to Georgia Tech Research Institute.

higher than division chief are eligible for the above awards.

Management: 1 GTRI-wide award. Any professional manager

is eligible, excluding only GTRI director and associate directors.

Research Support: elec-

(See "Awards," page 8)

1934-1984 50th Anniversary Come Join The Celebration



Photos by Charles Haynes

STRICTLY PERSONAL

ECONOMIC DEVELOPMENT LAB

The Environmental Health and Safety Division welcomes **Averil R. Callender**, a factory inspector with the Ministry of Labor of Barbados who will spend two months learning how we handle occupational safety and health hazards in the U.S. His visit was arranged by the Organization of American States and the U.S. Department of Labor/OSHA.

Anne DeCurtis has resigned and moved to New York City.

Pam and **Marty Melton** have a baby boy, Ryan Travis, born on August 27.

ELECTROMAGNETICS LAB

EML has made several organizational changes. **Andy Splessbach** will fill a newly created senior staff position for coordination of artificial intelligence programs. **Bob Hyde** has been named head of the Systems Analysis Branch of the Electro-Optics Division. Three new branches have been created within the Physical Sciences Division: Semiconductor Materials, **Chris Summers**, head; Semiconductor Devices and Circuits, **Charlie Rucker**, head; and Material Physics, **Billy Livesay**, head.

ELECTRONICS & COMPUTER SYSTEMS LAB

Dede Morgan has been promoted to staff assistant in the Office of Director.

Robert Voeks has joined the Biomedical Research Division as a research engineer I. He is a computer engineer who came to GTRI

from Enertec Inc. in Lansdale, PA.

In the Command and Control Division, **Mark Fries** has graduated from student assistant to research engineer I, and **Billy Wise, Randy Coleburn, and Roger Anderson** have resigned.

Congratulations to the following: Barbara and **Paul Friederich**, parents of Laura; Patty and **Scott Crowgoy**, parents of Erin Patricia; and John and **Jeanne Balsam**, parents of Justin Ryan.

ENERGY & MATERIALS SCIENCES LAB

Dr. Howard L. Greene, head of the Department of Chemical Engineering at the University of Akron, is working with EMSL in the area of catalysis on a sabbatical.

MINICOMPUTER SERVICE FACILITY

Former co-op student **William Joye** has been appointed a research engineer I after receiving his B.E.E. in August, and former GRA **John Dillard** has been appointed a research scientist I.

Belated congratulations to **Michael McGraw** on his marriage to Jane Stewart on July 21.

RESEARCH COMMUNICATIONS

Carol Massengale has received permanent appointment as clerk-receptionist. She had been with RCO for several months as a Rambler.

SERVICE GROUPS

Accounting: **Mildred Heyser** transferred to OCA on October 15 to accept a new position working with

terminating projects.

Facilities Management: Congratulations to **Brenda Hill**, who has been promoted to staff assistant, and to **Dianne Price**, who has been promoted to senior secretary.

Personnel Services: Welcome to **Marsha Braswell**, personnel assistant I, who transferred from a senior secretarial position in Physical Plant.

Supply Services: **Diane Kelly Collins** has transferred to the Office of Computing Services as a senior accounting assistant.

SYSTEMS & TECHNIQUES LAB

STL recently said hello to **Cynthia Milum**, programmer III, and **Vickie Bell**, word processor operator; goodbye to **Tom Vincent** and **Sandy Sheffield Rikard**.

Wedding Bells: **Kay Farill** and **Joseph Lindsey** (RAIL) were married on August 11. **Rob Gault** was married to Lisa Fox on August 18. **Al Vineyard** was married on September 22. **Terry Snipes** will marry Warren Short on November 17.

SYSTEMS ENGINEERING LAB

David Loftus has been elected SEL co-op of the year, and **Don Sanford** and **Daniel Mack** were named employees of the month for September.

Brian Butka is a new research engineer I in the Defense Systems Division, coming from Westinghouse.

Kevin Torres has rejoined the ESM Division as an electronics technician.

Connie Gann has joined the Countermeasures Development Division as a senior secretary.

Dennis Duckworth and **Guy Primiano** have resigned.

Ted Doll has accepted an adjunct appointment by the School of Psychology.

Sandra Hillmon had a boy, Jonathan Jerod, on September 17.

TECHNOLOGY APPLICATIONS LAB

Best wishes to **George Cokkinides** and **Vilma Maldonado**, who were married on September 4.



Kay Lindsey

Jan ten Wolde, a graduate student from Holland, completed four months of training in radar at RAIL in mid-October. RAIL has employed exchange students sponsored by the International Association for the Exchange of Students for Technical Experience for about eight years. All but one have been Dutch.

Awards (From page 6)

electronics labs, 2 awards; resources labs, 1; support groups, 1.

Graduate Student

Employee: 1 GTRI-wide award.

Undergraduate Student

Employee: 2 GTRI-wide awards.

A recipient of any award during the last three years is ineligible to receive an award this year.

Chairman Logan said, "Candidates are being evaluated on the basis of outstanding performance in individual areas of responsibility, with consideration

being given to junior as well as middle and senior personnel."

Each winner will receive a personal wall plaque, a \$50 certificate for dinner for two at any restaurant, and a letter of recognition from the Office of the Director. In addition, the recipient's picture and name will be displayed on the appropriate "traveling" plaque.

The awards will be presented at a reception on December 6 in the Student Center ballroom. All GTRI employees are invited to attend the party, which will be from 3:00 to 5:00 p.m.

WHAT'S AHEAD

Events of interest to GTRI employees

NOVEMBER

5-9 Continuing Education course, "Principles of Modern Radar." Administrator: Jerry Eaves (RAIL), 424-9609.

7 Georgia Tech Women's Forum, 12 noon, Alumni/Faculty House Ballroom. Dr. Sally Jackson (English Department) will speak on a Centennial theme.

26-29 GLOBECOM '84, IEEE Global Telecommunications Conference, Atlanta Hilton. (See story this issue.)

DECEMBER

4 Georgia Tech Women's Christmas Luncheon, Student Center Ballroom.

6 GTRI Research Awards Reception, 3-5 p.m., Student Center Ballroom.

Note: This column will list seminars, short courses, meetings, conferences, and other events to which GTRI staff are invited or which are of general interest.

HELP YOURSELF!

Software Training

GTIMS: Nov. 1, 2, 5, 6. 9-4:30.

Volkswriter. Nov. 7. 9-12.

DOS. Nov. 8, 20. 1:30-4:30.

Wordstar. Nov. 9. 9-12.

dBASE II. Nov. 12, 13, 15, 16. 9-4:30.

LOTUS 1-2-3. Nov. 14, 27. 9-4:30.

Advanced DOS. Nov. 19. 9-12.

Personal Editor. Nov. 26. 9-12.

"C". Nov. 28, 29, 30. 9-4:30.

Contact Software Training Facility, 325 Hinman, ext. 6206, for more information. Classes fill up rapidly!

Staff Development

Designed for Research Staff:

Strategies for Winning Worthwhile Research Projects:

Marketing - Proposals -

Negotiations. Dec. 12. 8:30-4:30.

These free seminars are taught by GTRI personnel. Persons completing a seminar earn .6 CEU. To register, contact your lab director. For more information, call Bob Collier, ext. 6238.

Designed for Support Staff:

Time Management. Oct. 26 and Nov. 2. 1-5. Cost: \$61. Conducted by Donna Goldstein, Creative Resources.

Written Communication. Nov. 8 and 9. 9-4:30. Cost: \$42. Conducted by Wilbur Campbell, Georgia State Merit System.

Communicating with Confidence. Nov. 30 and Dec. 7. 1-5. Cost: \$50. Conducted by Donna Goldstein, Creative Resources.

To register, contact Jean Fuller, ext. 6237.

the GTRI connector

Published monthly for employees of the Georgia Tech Research Institute

... is published for Carol Massengale, clerk-receptionist in the Research Communications Office ...



Patricia Stone

and other employees of GTRI.

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