# New Technical Assistance Center Starts



Participating in the contract signing ceremonies for the Southeastern Procurement Technical Assistance Center are (L-R) Jerry Goldbaugh, GTRC contracting officer; J. W. Dees, OCA director; Harold O. Watson, associate director of small business, Defense Contract Administration Services Region (DCASR) Atlanta; Captain Samuel J. Ligon, commander, DCASR Atlanta. (Photo by Charles Harmon)

The Southeastern Procurement Technical Assistance Center opened this month at Georgia Tech to help businesses in seven states sell their products and services to the Department of Defense.

The Defense Logistics Agency and GTRI are cosponsoring the center, which is managed by the Business Development Division (BDD) of the Economic Development Laboratory. A contract signing ceremony was held on September 6.

"DOD wants to increase the quantity and quality of the firms competing for DOD contracts, particularly in problem procurements," said Project Director Jon Schmidt. "Our primary thrust will be to actively identify areas in which DOD has experienced problems, then to identify firms qualified to bid on these items and work to bring more firms into the bidding process.

"We will concentrate on firms in labor surplus areas," Schmidt added. "This should help the economies of communities that need a boost."

BDD will provide the one-on-one marketing and technical assistance for which it already is well known. "The first year, we'll let firms know about the program and give them information on who, how, when, and where to bid," Schmidt explained. "We expect to do a lot of hand-holding — to walk the firm through the bidding process. This is the kind of service a firm can get from no other source. Later we plan to get into quality assurance and other manufacturing assistance."

The Procurement Technical Assistance Center will serve the states of Alabama, Florida, Georgia, Mississippi, North Carolina, South Carolina, and Tennessee. The 50-50 cost-sharing agreement between the government and GTRI is for one year, renewable annually.

## STL Reorganizes

As part of an ongoing plan to adapt the Systems and Techniques Laboratory's structure and operations to a changing market environment, the laboratory is disbanding the Systems Development Division (SDD) and merging its personnel, mission and programs with those of the Defense Electronics Division and the Microwave Systems Division. This change is expected to:

• Improve efficiency and personnel planning by integrating the mechanical design and support staff members with the electronics and microwave design staffs they have characteristically supported.

• Increase opportunities of the mechanical design and support staff for contributions to and recognition for contract development and program management.

• Reduce overhead costs and increase the availability of the technical expertise of SDD senior staff members by consolidating administrative tasks from three divisions into two.

## Grace Notes

# A Look at FY 1985

The past year was one of mixed emotions for GTRI. Nostalgia was blended with introspection as we celebrated the 50th anniversary of the Engineering Experiment Station's active existence, while welcoming the name change to the Georgia Tech Research Institute as better representing our present operations and future aspirations.

The excitement associated with the purchase of the Cobb County Research Facility by GSTRF, and our occupancy of desperately needed space in their new Centennial Research Building, was moderated by the hefty increase in lease costs associated with these two milestone events. While space, generally speaking, is no longer a current near-term problem, the need to find new sources of discretionary funds to invest in internal research and additional capital equipment has become even more critical.

Staff size and sponsored expenditures remained essentially unchanged compared with the previous year, but proposal activity, backlog and new awards increased.

We are adjusting to changing external conditions as well as internal ones. But the trend is toward anticipating and shaping those conditions, rather than simply reacting to them. GTRI is projected for modest, but sustained, growth in the near term and for doubling in size by the end of the century. While we plan to achieve these objectives, our commitment to quality of staff, quality of programs, and quality of interaction with the Georgia Tech community will remain paramount.

*Donald J. Grace*
Director, GTRI

## GTRI Vital Statistics

How did GTRI fare in FY 1985? Following is a comparison with FY 1984:

**Expenditures**
Sponsored Personal Services:
  1984 - $21.4 milion
  1985 - $20.9 million
Total Expended:
  1984 - $57.4 million
  1985 - $59.4 million

**Proposal Activity**
Submitted:
  1984 - $143 million
  1985 - $252 million
Awarded:
  1984 - $45.1 million
  1985 - $54.0 million
Pending:
  1984 - $60.5 million
  1985 - 141.9 million

**Sponsors**
Department of Defense:
  1984 - 64.1%
  1985 - 70.6%
Other Federal Government:
  1984 - 11.8%
  1985 - 14.6%
State & Local Government:
  1984 - 1%
  1985 - 1%

Industry:
  1984 - 23.1%
  1985 - 13.8%

**Employees (June 30)**
Full-Time Professional:
  1984 - 567
  1985 - 571
Full-Time Support:
  1984 - 271
  1985 - 273
Part-Time Staff:
  1984 - 171
  1985 - 127
Students:
  1984 - 279
  1985 - 266
Total:
  1984 - 1,288
  1985 - 1,237

**Space (Gross Sq. Ft.)**
Campus:
  1984 - 251,343
  1985 - 369,078
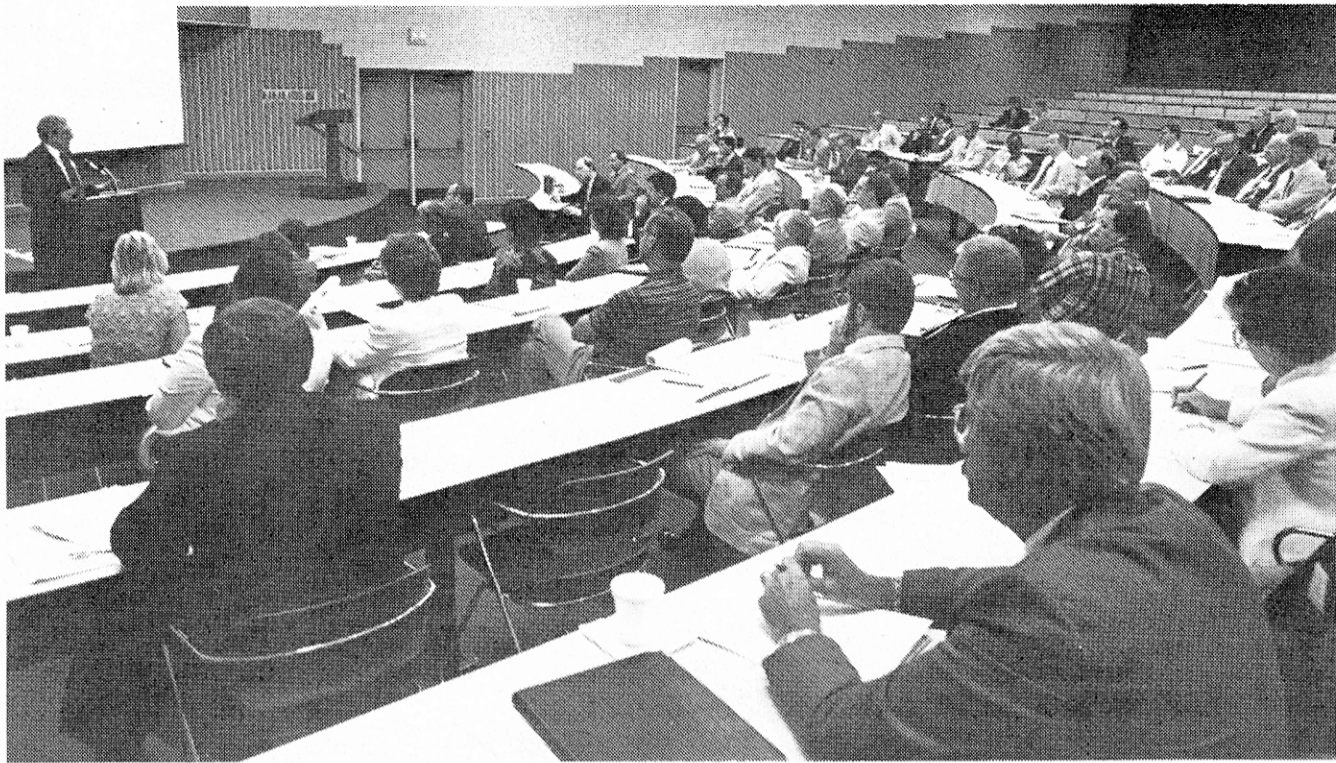Off-Campus:
  1984 - 150,907
  1985 - 154,706
Total:
  1984 - 402,250
  1985 - 523,784

# 2



Approximately 100 persons attended the Coastal Development Outlook conference in Savannah on August 26. EDL's Industrial Extension Division organized and conducted the meeting. Here, Georgia Tech Management Professor Carl Biven gives an economic overview. (Photo by Nancy Heffernan, Savannah News-Press)

## Chimera Named Asso. Director



Mr. Anthony (Tony) Chimera has joined the Systems and Techniques Laboratory as associate director. His appointment, announced at the laboratory director's meeting on August 16, was the result of an extensive search. Chimera previously had been head of the Countermeasures Branch of the former Antenna and Countermeasures Division in STL. After the GTRI-wide reorganization in 1979, he was appointed chief of the Countermeasures Division in the Systems Engineering Lab.

Chimera has had an interesting career in electronic warfare systems and analysis. At Georgia Tech, he has been involved in advanced ECM techniques evaluation and testing. Prior to accepting a position at GTRI, he worked at Calspan (formerly Cornell Laboratories), where he was head of their EW and Communications Section. In this capacity, he directed several project teams working on threat analysis systems.

He earned his B.E.E. in 1952 and his M.S.E.E. in 1959, both from the University of Buffalo.

STL Director Sam Alford said, "Tony brings to his new position a substantial variety of experience which will be directly applicable to the current work, as well as the long-range plans, for STL. Tony will specifically be assisting in project management and contract development as part of his initial duties."

## Centennial Celebration Set for October 11-13

By Lynda McDaniel

Georgia Tech will observe its 100th birthday during a spectacular Homecoming weekend October 11-13.

Showcase 100, an open house featuring exhibits, tours and entertainment, will inaugurate the three-day weekend on Friday, October 11, from 10 a.m. to 5 p.m.

Traditional Homecoming activities with a Centennial flair and, of course, football will fill Saturday's agenda. A grand processional and convocation is scheduled for Sunday, October 13.

During the open house, more than 100 laboratories and buildings will be open for inspection to alumni, public officials, and the general public.

The place to be at 10 a.m. on the 11th is just below the Tech tower on the quadrangle. There a welcome center for alumni and special friends will be the site of the opening ceremonies—a rousing program by the Third Army Band, opening remarks by Tech and local educators, followed by a round of fireworks and an explosion of balloons.

At 11 at the D.M. Smith building, Brig. Gen. Richard E. Hearne will cut the ribbon dedicating the newly remodeled Air Force ROTC building.

The Library will offer for the first time a public display of Georgia Tech's rare book collection. The walkway connecting the Library and Student Center will be filled with more than 50 booths representing student organizations.

The Student Center complex will be the site of another welcome center and a myriad of activity. Enjoy refreshments while watching students Pin the Tail on the Bulldog or decorate the best birthday cake. Several exciting exhibits will be on display inside the Center, including 25 working models of Leonardo da Vinci's scientific and visionary inventions. Contents of the student time capsule also will be on view. Tech's Centennial film and videos by Centennial speakers will be shown in the theater.

And what's a birthday without a cake? Cake will be served at four convenient locations: the Centennial Research Building, Peters Park, the Student Center, and the quadrangle. Buzz and the cheerleaders will light the candles on each cake, starting with the one at CRB.
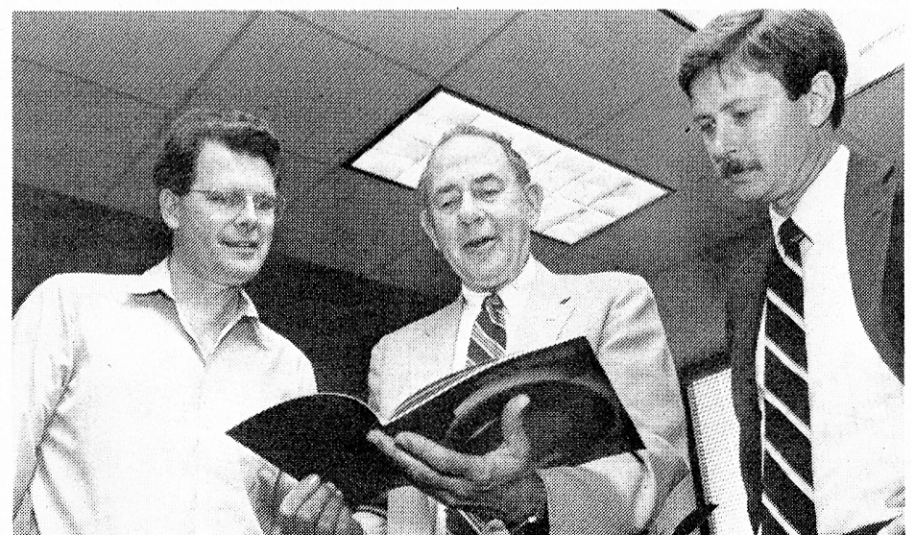
## Nominations Solicited for Research Awards

It's that time again—time for nominations for the annual GTRI research awards. If you would like to recommend someone for nomination in any category, please turn in the person's name right away to your laboratory director or department manager. These administrators are responsible for submitting official nominations from their units no later than October 15.
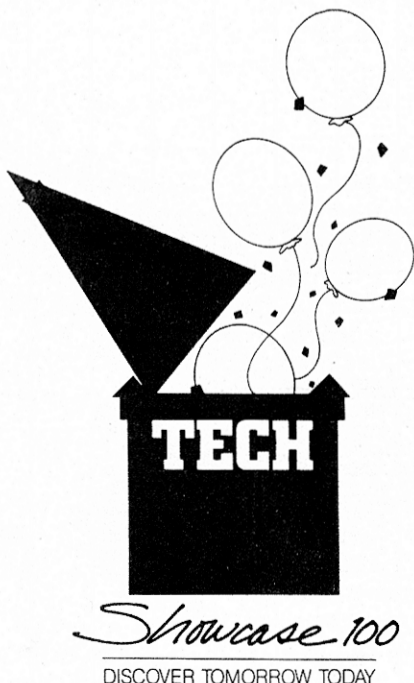
Jerry Mackey, chairman of the Annual Research Awards Committee, urges: "Be sure to consider junior research personnel as well as middle and senior research personnel. Evaluate the candidate with respect to being outstanding **beyond** the scope of responsibilities of the employee's position."

Again this year, the awards are for outstanding perfor-

See "Awards," page 4



Showcase 100
DISCOVER TOMORROW TODAY



GTRI Director Don Grace admires the new 1985 Annual Report presented to him by photographer Charlie Haynes (left) and editor Mark Hodges (right). The 28-page four-color booklet describes in text and photos 20 major areas of research activity. It was produced by the Research Communications Office. (Photo by Gary Meek)

## Software Review

**by Pat Mathiasmeier, RSTF**

The Research Software Training Facility offers programming courses in Golden Common LISP and C for the more advanced IBM PC user. Each course is three days in length and includes both lecture and hands-on experience.

### Golden Common LISP

An introduction to programming in LISP and to several AI techniques that are closely linked to the LISP language. The course uses Golden Common LISP, a subset of Common LISP for the IBM PC. The first day of instruction covers basic LISP functions, the GMACS editor, and the San Marco Explorer, an extensive LISP tutorial. The second day covers association lists, properties, frames, and how they are used to develop object-oriented programs. The third day centers on expert systems and inference engines; a forward chaining inference engine is introduced and used as an extended exercise. Prerequisite: Programming experience on the IBM PC.

### C Programming Language

An introduction to programming in the C language.

Originally developed for systems programming in the UNIX operating system environment, C provides performance approaching that of assembly language together with the portability and productivity features of a higher order language. Topics covered include structure, syntax, data types and structures, operators and expressions, control flow, functions, array and pointers, compilers, and support products. Prerequisite: Programming experience on the IBM PC.

These and most of the other classes available at RSTF are listed in the training schedule shown elsewhere on this page.
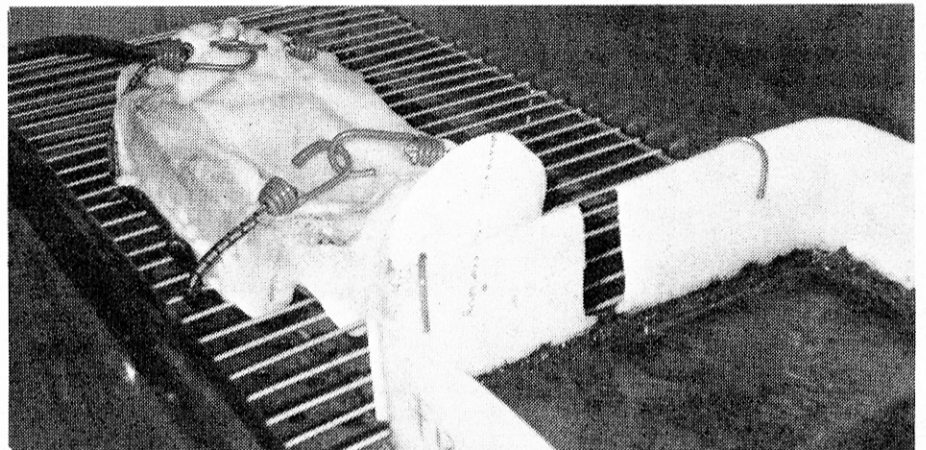
## Talent Search

IF you possess entertainment talents . . . IF you would like to perform on stage . . . the Entertainment Committee for the 1985 Georgia Tech Women's Christmas Luncheon wants to hear from you. Send a brief biosketch and description of your proposed individual or group act to GTRI-HRD/Entertainment Committee. Both male and female performers are welcome.

## Software Training Schedule

LISP (9-4:30): Oct. 14-16; Nov. 4-6.
"C" Language (9-4:30): Oct. 21-23.
Beginning Symphony (9-4:30): Oct. 7; Nov. 7.
Symphony Spreadsheet (1:30-4:30): Oct. 8; Nov. 1.
Symphony Graphics (1:30-4:30): Oct. 18.
Symphony Database (1:30-4:30): Oct. 25.
Symphony Communications (1:30-4:30): Nov. 8.
Integrating Symphony Environments (1:30-4:30): Nov. 15.
Symphony Word Processing (9-12): Nov. 19.
Computer Literacy (9-4:30): Oct. 9, 30; Nov. 18, 20.
Beginning PROFS (10-12): Oct. 4; Nov. 1.
PROFS Scheduling (10-12): Oct. 11; Nov. 8.
PROFS Document Mode (10-12): Oct. 18; Nov. 15.

Advanced PROFS (10-12): Oct. 25; Nov. 22.
Beginning DOS (1-4:30): Oct. 3, 4; Nov. 14. (9-12:30): Oct. 31; Nov. 13.
Advanced DOS (1:30-4:30): Oct. 11. (9-12): Oct. 24; Nov. 14.
Beginning dBASE II (9-4:30): Oct. 2; Nov. 12.
Advanced dBASE II (9-4:30): Oct. 28; Nov. 26.
Beginning Lotus 1-2-3 (9-4:30): Oct. 1, 10; Nov. 11, 21, 25.
Advanced 1-2-3 (9-4:30): Oct. 29; Nov. 27.
Superproject (9-4:30): Oct. 17.
Beginning Wordstar (9-12): Oct. 3. (1:30-4:30): Nov. 13.
Advanced Wordstar (1:30-4:30): Oct. 31; Nov. 22.
Volkswriter (1:30-4:30): Oct. 24.

Call 6206 to sign up for classes.



Everything's **not** coming up roses in EDL's Engineering Technology Branch! The accidental throwing of a switch recently caused an experimental sludge digester to melt down, to the consternation of O'Keefe personnel. Unfortunately, the researchers involved with the project were away from their offices when the problem became noticeable, delaying its correction. On the bright side, research often advances as a result of mistakes—the replacement will be redesigned using more reliable electronics. Meanwhile, project personnel hope their colleagues in the Environmental, Health, and Safety Division, newly moved into the ground floor of O'Keefe, will forgive the unusual welcome. (Photo by Nancy Davis)

# PROFESSIONAL ACTIVITIES

**ECONOMIC DEVELOPMENT LAB**
**Bill Darley** and **Sherman Dudley** of IED's Rome and Douglas offices, respectively, have completed a three-summer study program at the Economic Development Institute. Located at the University of Oklahoma, the Institute offers professional education in industrial and economic development.

**Dave Jacobs** spoke on occupational hazards associated with use of nitrous oxide in dentistry to the Metro Atlanta Dental Study Group August 13.

**John Adams** coauthored a paper, "GEMS Analysis of Water Reuse in a Pulp and Paper Mill," which was presented at the American Institute of Chemical Engineers national meeting in Seattle this summer.

EDL's Industrial Education Department presented its 18th Annual Industrial Training Conference August 11-15 at Jekyll Island. More than 75 persons from government, industry and education participated in this event, the theme of which was "Increasing Productivity

through Employee Skill Development."

**John Nemeth** will participate in a hazardous waste workshop during an environmental conference at Georgia State University on September 28. The Occupational Safety and Health Administration has selected him to act as an assessor in its national pilot training program for developing senior-level management professionals in OSHA.

**ELECTRONICS & COMPUTER SYSTEMS LAB**
**Eric Barnhard** will present a paper, "An Examination of the Low Probability of Intercept (LPI) Characteristics of Extra High Frequency (EHF) Air-to-Air Communications Systems," at the 1985 Military Communications Conference in Boston, October 20-23. Coauthor **Bob Rice** also will attend.

**ENERGY & MATERIALS SCIENCES LAB**
**Jan Gooch** will present a paper titled "Techniques for Characterization of Engineering Polymers and Coatings" at the 14th Annual North American

Thermal Analysis Society Conference in San Francisco on September 16.

**RADAR & INSTRUMENTATION LAB**
**Gene Greneker, Billy Statham,** and **Mel McGee** coauthored a paper titled "Radar Intrusion Detection Simulation" that was presented at the First Annual Physical and Electronic Security Symposium and Exposition. The symposium, held in Philadelphia, PA, August 19-21, was sponsored by the Armed Forces Communications and Electronics Assn.

**SYSTEMS & TECHNIQUES LAB**
**Pat Burns** presented a paper titled "A Computer Aided Design Method for Optimizing Phased Array Antenna Geometry" at the 1985 International Symposium on Antennas and Propagation, held August 20-22 in Kyoto, Japan.

**Don Bodnar** presented a paper titled "A Synthesis Technique for Feed Array Distributions" at the International Symposium on Microwave Technology in Industrial Development—Brazil.

## Personal Notes

**ECONOMIC DEVELOPMENT LAB**
On August 12, Charles and **Voranda Prather** became the proud parents of a boy, Landen Stuart.

Gina and **John Adams** announce the birth of a daughter, Lia Amanda, on August 14.

**ELECTRONICS & COMPUTER SYSTEMS LAB**
Congratulations and farewell to **Debbie Peck** and **David Bessenger**, both of whom were graduated on September 7 and were married to each other on September 14.

Condolences to **Bruce Warren** on the recent loss of his mother; to **Janet Leininger** on the loss of her father; and to **Darrell Acree**, whose grandfather passed away.

**SUPPLY SERVICES**
**Deanne Reese** and her husband, Mark, welcomed a son, Eric Mark, on July 25.

**SYSTEMS & TECHNIQUES LAB**
Best wishes to the following newlyweds: **Debbie Schreiber** and Richard Winn, who were married on June 20; **Robert Moore** and Lucy Rymer, July 12; and **Marvin (Marty) Hill, Jr.** and Tammy Clonts, August 24.

# PERSONNEL NEWS

**ECONOMIC DEVELOPMENT LAB**

Jenny Padgett, research scientist II, and **Michael Gladle**, research scientist I, have joined the Environmental, Health, and Safety Division.

**William Garmon,** research engineer II, will assist **Elliot Price** in IED's Augusta regional office. Two research engineer I's, **David Earnest** and **Dale Stapler,** have been assigned to the Albany and Macon offices, respectively. **Maxie Goff** is the new administrative secretary in the Albany regional office.

Returning from an 11-month industrial energy conservation assignment in Central America, **Alan Pashkevich** has joined the Industrial Energy Group and is brushing up on his "Georgian" for energy conservation assistance on a more local level.

In late September, EDL consolidated its three divisions under one roof—the rust-red shingles of O'Keefe. This marks the first time in many years that the lab's components have been housed in the same building. The offices of the director and the EHSD chief are now located on the ground floor of O'Keefe; the IED and BDD chiefs have offices on the second floor. Only EHSD's Analytical Lab remains separated, still residing in Emerson.

**ELECTROMAGNETICS LAB**

**Eric H. Binker,** B.S.E.E., joined the Electro-Optics Division in July. He came from Hawaii, where he was employed with a scientific consulting firm. Assigned to the Image Analysis Branch as a research engineer II, he is conducting terrain analysis and geographic database investigations.

**David W. Hughes,** Ph.D., E.E., has joined the Physical Sciences Division as a senior research engineer assigned to the Semiconductor Devices and Circuits Branch. Dr. Hughes formerly worked with Motorola, Inc., where he engineered their oxide isolated, high-voltage bipolar process and built the world's first 100 mm dielectrically isolated production circuits. He received his degrees from Georgia Tech.

**Anthony J. Hynes,** Ph.D., chemistry, was formerly a post-doctoral fellow with the Molecular Sciences Branch of EML. He has joined the staff as a research scientist II and is conducting research in atmospheric chemical kinetics.

**David W. Roberts,** research scientist I, has joined the Electro-Optics Division, working with the Sensors and Devices Branch. Prior to receiving his M.S. in physics from Georgia Tech in June, he was a GRA with EML.

Former GRA **Mark S. Clinard** began work as a research engineer I in July after receiving his M.S.E.E. from Tech in June. He is working in the Systems and Analysis Branch of the Electro-Optics Division.

**Beatriz Gonzalez** has transferred to EML from ECSL and is now the administrative secretary for the Physical Sciences Division.

**Rita Molyneaux** has joined the Molecular Sciences Division as a senior secretary.

**ELECTRONICS & COMPUTER SYSTEMS LAB**

ECSL says farewell to **Diane Karneboge** and **John Owen** and welcome to new student **Kim Toatley.**

**OFFICE OF DIRECTOR**

**Cherri Dunn** is the new staff assistant for Bob Shackelford and Howard Dean. She previously was an administrative secretary in the E.E. School. She has been at Georgia Tech for four years, and her husband is a Tech graduate.

**Kathleen Shewmake** has resigned.

**RADAR & INSTRUMENTATION LAB**

**Jim Kurtz** is a new senior research engineer at RAIL. He previously worked at the University of Florida, where he obtained his B.S. degree. He received his master's from the University of California.

Another new face at RAIL is **Jill Butterfield,** research scientist I. A new graduate of Greenville College in Illinois, she has a B.S. degree in mathematics. Her previous experience is in computer programming.

A big welcome to **Peter Ran,** research engineer I (hourly). He is the latest in RAIL's tradition of exchange students from Holland and is here for the fall quarter.

**Sam Thomas** and **Dick Sciria** have resigned.

**SERVICE GROUPS**

The Human Resources Dept. has gained two new personnel assistant II's—**Cathy Dunnahoo,** who transferred from the GIT Personnel Dept., and **Jan Lewis,** who came from Georgia State University.

**Jill Brown** has transferred from OCA to the Research Property Managment Dept. as a senior secretary.

**SYSTEMS & TECHNIQUES LAB**

**James A. Hyndman,** senior research associate, has joined the "A" Program Office. He was formerly the deputy director of communications with the Central Intelligence Agency.

New research engineer I **Lance Diamond** is an E.E. graduate of Georgia Tech and comes to STL from Hughes Aircraft Company.

Joining the Microwave Systems Division as a research engineer I is **John Sanford,** a graduate of Syracuse University.

Former co-op **Ann Roe** has been made a research technologist I. She is an IET graduate of Southern Tech.

**Violet Buck** and **Lisa McDonald** were temporary employees who have joined STL full time as word processor operators.

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## Awards (from page 2)

mance in the following categories:
- **Research**—3 awards from the research labs
- **Program Development**—3 awards from the research labs
- **Management**—1 GTRI-wide award
- **Research Support**—3 awards from the research labs; 1 award from the support departments
- **Graduate Student**—1 GTRI-wide award
- **Undergraduate Student**—2 GTRI-wide awards

The awards will be presented at a reception on December 5, to which everyone at GTRI is invited. Each winner will receive a personal plaque, a dinner gift certificate, and a letter of recognition from OOD. A large "traveling" plaque with the recipient's picture will be placed on display at the recipient's work location.

## Tickets Available for Skinner Talk

Reserved seat tickets for the October 8 Centennial lecture by noted psychologist B.F. Skinner are going fast. If you haven't already picked up your free ticket, you had better do so now.

The free tickets entitle Georgia Tech students, faculty, staff and their guests to seats in a reserved campus section of the Coliseum. They may be picked up from September 23 to October 7 at the following locations: Centennial Research building lobby, Faculty Lounge, Library circulation desk, and Tick-A-Tech.

Ticket holders should use Gate 2 (Fowler Street entrance). Doors open at 10:30 a.m., and the lecture is at 11:00.

## Continuing Ed Calendar

**OCT.**

**2-4** — **Indoor Air Quality Symposium.** Atlanta. Cosponsored by EDL Environmental, Health, and Safety Division and American Industrial Hygiene Assn. Course Directors: Marilyn Black and Charlene Bayer (EDL), ext. 3806.

**15-18** — **Supervision of Asbestos Abatement Contracts.** Atlanta. Coordinators: Bill Ewing and William Spain (EDL/EHSD), ext. 3806.

**16** — **Improving Electrical Efficiency in Industry.** Atlanta. Sponsored by the Georgia Office of Energy Resources. Technical Coordinator: Mike Brown (EDL Industrial Energy Extension Service), ext. 3636.

**29** — **Microprocessor Systems for Industry.** Macon. Instructors: George Rivers and Harris Johnson (EDL Industrial Extension Service). Call Rivers at 912-264-6910.

**NOV.**

**4-8** — **Principles of Modern Radar.** Atlanta. Course Coordinator: Jerry Eaves (RAIL), 424-9609.

**12** — **Asbestos Awareness Seminar.** Atlanta. Sponsored by Environmental Protection Agency and EDL Environmental, Health, and Safety Division. Coordinators: Bill Ewing and William Spain (EDL), ext. 3806.

**13** — **Asbestos Abatement Workshop.** Atlanta. Coordinators: Bill Ewing and William Spain (EDL), ext. 3806.

**18-21** — **Phased-Array Antennas: Theory, Design, and Technology.** Atlanta. Course Administrator: Larry Corey (STL), 424-9663.