New Technical Assistance Center Starts

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.

"BDD 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 Technologies 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.

GTRI Vital Statistics

| Industry: | 1984 - 23.1% | 1985 - 13.8% |
| Full-Time Professional: | 1984 - 567 | 1985 - 571 |
| Part-Time Staff: | 1984 - 171 | 1985 - 177 |
| 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 - 90,070 | 1985 - 154,706 |
| Total: | 1984 - 402,250 | 1985 - 523,784 |
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 procession and convocation is scheduled for Sunday, October 12.

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 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 remodelled 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.

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.”

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 performance.

See “Awards,” page 4

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 Common LISP and C for the more advanced IBM PC user. Each course is individually designed 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 Common LISP 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 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.

Software Training Schedule

LISP (9-4:30): Oct. 14-16; Nov. 4-6.
Beginning Symphony (9-4:30): Oct. 7; Nov. 7.
Symphony Spreadsheet (1:30-4:30): Oct. 8, Nov. 11.
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, 26.
Beginning PROFS (10-12): Oct. 4, Nov. 10.
PROFS Scheduling (10-12): Oct. 17, Nov. 8.
PROFS Document Mode (10-12): Oct. 18, Nov. 15.

Advanced PROFS (10-12): Oct. 25, Nov. 22.
Beginning DDS (1:4-3:00): Oct. 3; Nov. 14. 9:12-30; Oct. 31; Nov. 16.
Beginning dBASE II (9-4:30): Oct. 2; Nov. 12.
Advanced 1-2-3 (9-4:30): Oct. 29; Nov. 7.
Advanced Wordstar (1:30-4:30): Oct. 31; Nov. 22.

Call 6206 to sign up for classes.

Talent Search

IF you possess entertainment talents . . . IF you would like to perform on stage . . . the Entertainment Committee for the 1986 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.

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 1986 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 Association.

SYSTEMS & TECHNIQUES LAB

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 Bessinger, both of whom were graduated on September 7 and were married to each other on September 14.

Condivolos 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 new arrivals: 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 research scientist I, have joined the Environmental, Health, and Safety Division. William Garmon, research engineer II, will assist Elliot Price in DOE’s Augusta Regional Office. Two research engineer Is, David Earnest and Dale Stapler, have been assigned to the Albany and Macon offices, respectively. Maxie Golit 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 “Georgienn” for energy conservation assistance on a more local level. In late September, EDL consolidated its three facilities under one roof—the red-stung chickens of O’Keefe. This marks the first time in many years that the lab’s three components have been housed in the same building. The offices of the data center and the Saturnian chief are now located on the ground floor of O’Keefe; the IED and B&D chiefs have offices on the second floor. Only EHSD’s Analytical Lab remains separated, still residing in Emory.

ELECTROMAGNETICS LAB
Eric H. Bintker, B.S., E.E., joined the Electro-Optics Division in July. He came from Hawaii, where he was employed with a scientific consulting firm. Assignee to the Image Analysis Branch as a research engineer II, he is conducting data 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 at 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., chemist, 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 QRA with EML.

Former GRA Mark S. Clarendon began work as a research engineer 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 EML and is now the administrative secretary for the Physical Sciences Division. Rita Molyneaux has joined the Molecular Sciences Division as a senior secretary.

OFFICE OF DIRECTOR
Cheri 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 Shawmke has resigned as research scientist. Industrial Radar and Instrumentation Lab
Jim Kurtz is a new senior research engineer at RAI. 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 RAI 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 RAI’s tradition of exchange students from Holland and is here for the fall quarter. Sandy Thomas and Dick Sciera have resigned.

SERVICE GROUPS
The Human Resources Dept. has gained two new personnel assistants—Cathy Dunnahoo, who transferred from the GTR Personnel Dept., and Jan Lewis, who came from Georgia State University. Jill Brown has transferred from OCA to the Resource Management 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 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 Santibanez, a graduate of Syracuse University.

Former co-op Ann Roch has been made a research technologist. 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.

Awards (from page 2)

The awards in the following categories:
• Research—3 awards from the research labs
• Program Development—3 awards from the research labs
• Management—1 GTR-wide award
• Research Support—3 awards from the research labs; 1 award from the support department
• Graduate Student—1 GTR-wide award

• Undergraduate Student—2 GTR-wide awards

The awards will be presented at a reception on December 5, to which everyone at GTR is invited. Each winner will receive a personal plaque, a dinner gift certificate, and a letter of recognition from GTR. 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.

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

and other employees of GTR.

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Editor
Martha Ann Beegar, RCO
Photographer
Charles Haynes, RCO
Associate Photographers
Dea Ramundo, OOO 3401
Lincoln Bates, EDL 6230
Gail Tuchel, EML 3500
Joann Ward, ECSL 3542
Charlette Irving, EMPL 2469
Maggi Harrison, RAIL 424-9621
Bill Williams, SEC 3250
Vickie Fennell, STL 424-9611
Art Vandenberg, CDRS 6203
Marianne Thompson, Services 3445

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