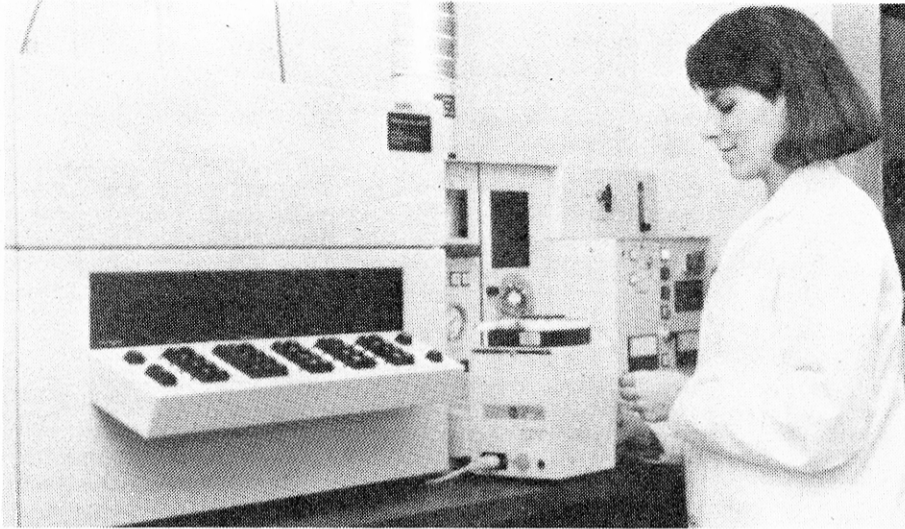


# the GTRI connector

Published monthly for employees of the Georgia Tech Research Institute

Volume 1 Number 9

July-August 1985



Dr. Charlene Bayer analyzes air samples for trace metal contamination using an inductively coupled plasma emission spectrometer. (Photo by Patricia Stone)

## Environmental Research Burgeons at EDL

by Lincoln Bates, EDL

An anonymous Los Angeleno once remarked, "I never trust air I can't see." Research in EDL's Environmental, Health, and Safety Division (EHSD) has penetrated behind that ironic remark, examining the potential hazards of the invisible air we breathe in our offices and homes.

Dr. Marilyn Black, head of the division's analytical laboratory, says about 50% of her section's research involves measurements of indoor air contaminants, chiefly for-

maldehyde. The lab tests outgassing of formaldehyde from consumer products such as fabrics, carpet and pressed wood products. "No residential or non-occupational ambient standard now exists," she says, noting that formaldehyde is a known respiratory irritant to certain individuals.

The lab is refining its large environmental chamber and experimenting with a smaller, less expensive chamber that industry could use in quality control. Equipped with \$1 million worth of instrumentation, Dr. Black and her staff also have

begun investigating emissions of volatile organics from such sources as cigarette smoke, pesticides, construction materials, and cleansers. Georgia Tech will host a three-day symposium on indoor air quality in early October.

In the last two years, EHSD efforts have expanded with a growth spurt even kudzu could admire. "We're a \$2.5-million organization now," observes Division Chief Dr. John C. Nemeth, "and we're projecting an additional \$2.5 million of sponsored research within the next eight months."

Applied research projects fall into a broad range:

- The Asbestos Programs Group presented three research papers at the recent American Industrial Hygiene Association (AIHA) conference and is one of EPA's three national Asbestos Information Centers.

- Study and analysis of body motion and associated stress help ergonomics specialists reduce the incidence of injury in the labor force. Borrowing from the literature and employing computer models, EHSD's Dan Ortiz seeks ways to enhance a worker's comfort and efficiency, thereby saving the employer money. "About 70% of our work is in manual materials handling," he says, adding that an evaluation can entail everything from interior lighting to worker psychology.

- Phil Williams is performing a chemical criteria update for the National Institute of Occupational Safety and Health (NIOSH) and is reviewing the compound pentachlorophenol and its toxicity for the AIHA Hygienic Guide Series.

- In evaluating use of nitrous oxide ("laughing gas") in dental offices across Georgia, EHSD industrial hygienists in some instances have found levels much higher than those recommended by NIOSH. The anesthetic may adversely affect liver, kidney and reproductive functions.

- Acquisition of the former Agricultural Technology Branch gives EHSD another applied research dimension. Craig Wyvill, head of the renamed Engineering Technology Branch, says his staff continues to conduct research and technology transfer in such areas as sludge dewatering, waste management, solar heating, computerized farming, and poultry processing.

Other opportunities await. Dr. Black predicts expanded concern with indoor air quality, such as the effects of pesticides, and renewed interest in outdoor air pollution, particularly that generated by industry. She suggests that EHSD indoor sampling and analytical techniques also may be applicable to outdoor assessment.

See "EDL," page 2

## Electric Utility Changes Spur Research

Electric utilities are confronting diverse new strategic options today, and they are turning to research institutions like GTRI to help them examine, compare and develop these options.

Prior to 1970, most utility planning efforts were short-term and conventional because the future was easily predicted from the past. Load forecasting mirrored actual growth in electricity demand, and power generation planning resulted in plant additions at decreasing unit costs.

Beginning in the mid-1970's, however, new forces began to alter the economics of the electric utility business. Rising unit costs, declining productivity, inflationary pressures, reduced load growth, declining public image, less cooperative regulation, uncertainty about nuclear construction programs, and environmental threats such as

acid rain created tough new issues for utility decision makers.

Now research opportunities are proliferating as electric utilities explore such diverse corporate strategies as:

- creating power pools and joint ownership contracts with neighboring utilities;
- diversifying into other utility businesses such as using existing transmission and distribution systems for communications applications;
- expanding into alternate energy sources such as fuel cells or into service areas such as the design and management of cogeneration facilities; and
- developing pricing and load management strategies to spread more customer load to off-peak hours.

To help with these complex issues, utilities are enlisting the expertise of institutions

like GTRI in new technology research and sophisticated mathematical and computer modeling. Two new projects in the Electronics and Computer Systems Laboratory (ECSL) illustrate the varied possibilities for electric utility research.

Under the sponsorship of Sangamo Weston, Dr. Linda Martinson of ECSL's Computer Technology and Applications Division (CTAD) is developing an experimental design for field testing to evaluate advanced modulation techniques and to determine how well the power line distribution system functions as a communication channel. Currently, the function of a distribution power line is to be the last, low-voltage link in the electric system that delivers electricity into the customer's home. In the future, the distribution system may also serve as a communica-

tions channel for load management control, security devices, or computer connections.

Martinson and Dr. Brit Williams, also of ECSL / CTAD, are administering a second project, jointly sponsored by Oglethorpe Power Corporation, Georgia Power Company, and the Municipal Electric Authority of Georgia. The purpose of this project is to develop a Georgia territorial power supply agreement for the purchase and sale of power between participants. Joint agreements or power pools enable utilities to plan and operate their generation and transmission facilities in concert to supply power for their combined load requirements and maintenance programs.

Complex utility issues require sophisticated computer models to accurately examine

See "Utility," page 3

## Electro-Optics Expert Joins ECSL Staff

Dr. John G. Meadors, a nationally recognized expert in electro-optics, has joined the staff of the Electronics and Computer Systems Laboratory under the auspices of the Senior Research Faculty Leadership Program. He will be working in the Electromagnetic Effectiveness Division.

Dr. Meadors comes to ECSL from Global Analytics, Inc. of San Diego, California, where he was responsible for research initiatives to demonstrate the technology for signature control of a class of vehicles. He previously worked at Battelle in Columbus, Ohio, for several years. While at Battelle, Dr. Meadors focused his attention on establishing a laboratory facility to support innovative research initiatives in the application of advanced



technology to problems of national defense and industry. Emphasis was on providing a state-of-the-art measurement capability for diagnostics and evaluation of electronic systems and materials.

Before joining Battelle, Dr. Meadors was employed by the Electrical Engineering Department and ElectroScience Laboratory of The Ohio State

University. As a member of the faculty, he served as principal investigator on many research programs in the areas of electromagnetics and optics. Some of his research activities at Ohio State included advanced instrumentation, infrared technology, time domain electromagnetics, and optical electronics. He is a graduate of Ohio State (Ph.D., 1964) and Auburn University (B. Eng., 1959; M.S. in Physics, 1961).

Dr. Meadors, who is a nationally recognized scientist in the area of signal suppression, will be working with other GTRI personnel on several projects. Activities will include initiating new research efforts within GTRI, as well as expanding ongoing efforts in the rapidly growing area of multi-spectral signature suppression.

## NEWS BRIEFS

### ECONOMIC DEVELOPMENT LAB

Tze Chiang is the author of a report entitled "Economics of Oriented Strand Board Production in Georgia." The work is the first in a series of studies exploring possibilities for greater utilization of the state's hardwood resources. Dr. Chiang flies to Finland this month to examine that country's advanced timber technology regarding laminated veneer lumber, hardwood plywood, and gypsum flakeboard.

Wayne Daley, Costa Soulakos, Ken Huffines, and Craig Wyvill of the Engineering Technology Branch recently installed Georgia Tech's Computerized Inspection Monitoring System (CIMS) in the Accomac, VA, poultry processing plant of Perdue Farms, Inc., with system startup occurring at 4:49 a.m. on July 17. CIMS, developed by Tech engineers under a program jointly sponsored by Perdue and the U.S. Department of Agriculture, is designed to apply feedback and control to the monitoring of poultry inspection activities.

EDL's Industrial Extension Service focuses on coastal Georgia's economic development with a conference in Savannah August 26. The one-day meeting—designed for industry and financial leaders, architects, government officials, educators, utility managers, and others—will examine the outlooks for the tourism, transportation, military and manufacturing sectors. The conference is cosponsored by Georgia Tech and the Coastal Georgia Center for Continuing Education.

### ELECTROMAGNETICS LAB

EML hosted the summer meeting of the Advanced Target Recognizer Working Group June 25-28. ATRWG is a government-sponsored organization which meets three times a year to discuss current target recognition research and development trends in the areas of applications, evaluation, artificial intelligence, database, and security. Georgia Tech was the first university host of ATRWG in its four-year existence.

GTRI Associate Director Gerald Carey officially welcomed the group, stressing the value of having an effective working group in the area of target recognition. ATRWG committee meetings were held across the campus in the Baker, CRB, Swann, and SST buildings. GTRI personnel also gave demonstrations in the areas of artificial intelligence, image processing, and three-dimensional modeling. John Gilmore of EML organized and coordinated the meeting.

## Computer Installed to Help Egypt's Industry

by Art Vandenberg, MCSF

MiniComputer Service Facility personnel have added their expertise to the Industrial Technology Applications Program (ITAP), a multi-year project to establish an industrial extension service for Egypt.

Jim Consuegra and Lee Gantt recently completed an assignment in Cairo to install a VAX 11/730 computer for ITAP at the Engineering and Industrial Design Development Center (EIDDC) in Giza. EIDDC, an agency of the Egyptian Ministry of Industry and Mineral Wealth, is cooperating with GTRI's International Division on the multimillion-dollar ITAP project under a grant from

the U.S. Agency for International Development. Bill Larson is the Georgia Tech project director.

EIDDC will be using the VAX initially for computer-aided design (CAD) system applications and training projects for Egyptian companies that are seeking to improve production techniques, streamline assembly lines, or model their development. EIDDC, which is headed by Dr. Y. K. Mazhar, is responsible for providing a variety of technical services to the industrial sector of Egypt.

Consuegra and Gantt were responsible for both the hardware and software installation. In addition to installing the

CPU, dual disk drives, console and several PC's, they spent several weeks training ITAP computer personnel on their new system.

Their work grew out of a series of consultations after Dr. Mazhar's visit to Georgia Tech in November 1984 to participate in a management review of the ITAP project. Dr. Donald Grace and Howard Dean worked with Dr. Mazhar in defining his needs. Consuegra and Gantt, in consultation with Fred Dyer, developed the system configuration that was installed. Bob Kyle of the ITAP project helped them choose and purchase the equipment.

## RAIL Units Merge

Two divisions of the Radar and Instrumentation Lab have merged. The Development Division and the Instrumentation and Measurements Division have gradually grown closer in their missions and, on several occasions, have combined personnel and facilities to accomplish specific projects. Anticipating a continuation of larger, more complex programs requiring their combined resources, the divisions have been merged into a new Technology Development Division.

Charles Brown is the division chief, and Trent Farill is associate chief. Branches and their heads are as follows: Radar Technology Branch, Clark Butterworth; Instrumentation Technology Branch, Rob Michelson; RCS Techniques Branch, Evan Chastain; and Systems Development Branch, Ted Lane.

## Computer Services Revamped

GTRI's computer-related services have been restructured into a newly created Computer Related Services Department. It brings together the functions of the MiniComputer Service Facility, networking facilities, a management information (GTIMS) development team, the Research Software Training Facility, and a group for general support and assistance.

As a service activity, the new department will report to Pat O'Hare, the assistant director for administration. Technical and policy guidance will be provided from OOD, with specific responsibility assigned to Bob Shackelford, assisted by Fred Dyer. Dyer also will temporarily manage the new department.

Functions of the work groups within the department and an appropriate selection process

for permanent leadership are still being defined, but the interim organizational setup is as follows:

- **Operations Group:** VAX, IBM, network, database administrator.
- **Applications Development Group:** GTIMS, M204, other projects.
- **Supporting Services Group:** Training, work station support, other support.

Thanks to you  
It's working



The United Way

## EDL (from page 1)

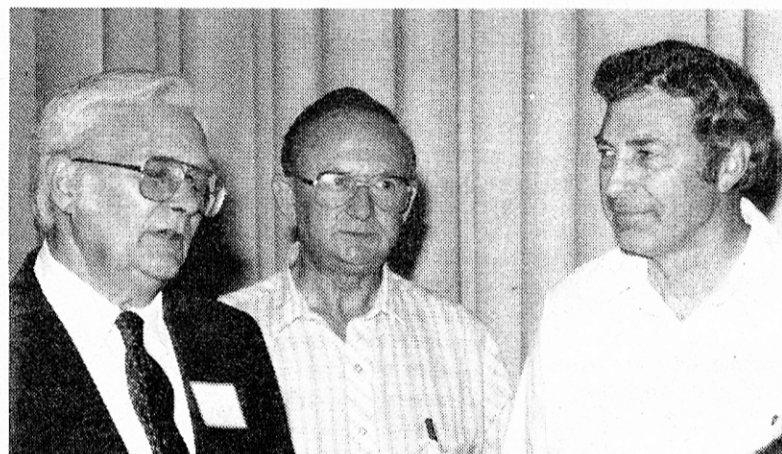
Dr. Nemeth notes: "We are now in the midst of a national pilot program of innovative voluntary compliance with hazardous waste laws. In the near future, we look forward to joint efforts with other GTRI labs and centers such as Biotechnology. Research programs will range from hazardous waste incineration to environmental health sciences."



## It's Time to Retire!



A retirement reception on June 27 honored nine employees. Pictures clockwise from top left show the following: 1-After serving nearly 19 years as an administrator in EDL, Associate Lab Director Hardy Taylor tells friends good-bye. 2-The inimitable Archie Corriher (RAIL), an electronics pioneer with 34 years at Tech, gleefully looks forward to a new career as a retiree. 3-Frank Gleason, shown here with his wife, Eunice, served Georgia Tech for 14 years as a top administrator in procurement, computing services, and business and finance; during the past year, he was head of the Technology Transfer Office of the Vice President for Research. 4-Conrad Meaders (right) of STL reminisces with Berry Pyron about his 28½ years of widely varied service to Georgia Tech in electronics research. 5-Master instrument maker Bob Knox (left), who came to Tech in 1978, chats with his co-workers in the Mechanical Services Department. 6-Former GTRI Director of Services Bill Ward, who got a five-month head start on retirement after 20 years of service, proves that there is life after Tech. Three honorees were not present at the reception: Computer expert Larry Gallaher (SEL) retired in March after nearly 22 years at Tech. Research Professor of Physics Ed Scheibner, who retired from STL in December after 25 years at Tech, at one time headed EES's Physical Sciences Division. Harvey Diamond completed 25 years as a market analyst and economic researcher at EDL. (Photos by Charles Haynes)



## GTRI Pledges Over \$39,000 to United Way

In the recently conducted United Way campaign, GTRI employees contributed \$39,389.76, an increase of \$3,858.76 or 10.9% over last year. Some 476 full-time employees (compared to 470 in 1984) and 30 part-time workers gave or pledged an average of nearly \$78 per person.

Georgia Tech was honored this year by being chosen as one of only 12 Atlanta organizations to participate in the United Way Pacesetter Program. And GTRI was honored by having Associate Director Jim Wiltse serve as chairman of the campus campaign.

"We are pleased with the response from GTRI," Wiltse said, "especially in light of the confusion caused by having the campaign follow so soon on the heels of the 1984 solicitation. Thanks go to many individuals who worked hard on the campaign, but I would particularly like to thank Bill Howard, who ably coordinated the GTRI solicitation, Ann Mintz, who assisted me in so many ways on the overall campaign, and the GTRI laboratory and service department unit coordinators."

The campus campaign has been extended through the summer. GTRI needs only \$1,470.89 more in pledges to reach its goal of a 15% increase over last year's contribution. If you would like to help GTRI go over the top, as well as help Atlantans in need, it's not too late to pledge. Contact Bill Howard, OOD, ext. 3359.

### Utility (from page 1)

the economic impacts of the various strategic options by simulating all the functions of an electric utility. Martinson, who was a senior power supply analyst at Georgia Power Company before joining GTRI, and Bob Lann, who is the manager of the Economic Analysis Group in the Economic Development Laboratory, are writing several joint proposals to develop and apply these computer simulation models to utility issues. Their approach combines "demand-side" planning (i.e., from the customer end of the system) with "supply-side" planning (i.e., from the utility's side of the system). As utility issues grow more complex, the joint planning or consortium approach to utility research that GTRI can provide will become more attractive.

## PROFESSIONAL ACTIVITIES

### ECONOMIC DEVELOPMENT LAB

The leader of EDL's Asbestos Programs Group recently was drafted by Georgia's top brass. **Bill Ewing** was appointed Lieutenant Colonel, Aide de Camp, Governor's Staff, an honor bestowed upon him for assistance to Governor Joe Frank Harris and the state with programs and surveys concerning asbestos-containing materials in buildings. Heavily involved in local and national asbestos abatement issues, Ewing was instrumental in developing and conducting the Governors' Conference on Asbestos held in Atlanta last April.

At the 1985 summer Board of Directors meeting of the Georgia Poultry Federation in Destin, FL, **Craig Wyvill** made a presentation regarding long-range plans for Tech's Agricultural Research Program, which heavily supports poultry engineering research.

The American Society of Agricultural Engineers recently gave **Nancy Davis** and **Mike Smith** a Blue Ribbon award for their Poultry Engineering Review, "Heat Recovery for Processors."

**Carol Aton** has been appointed to a third term as national publications chairperson for the Society of Women Engineers.

**Phil Williams** is principal editor of a new book, *Industrial Toxicology—Safety and Health Applications in the Workplace*. The comprehensive 500-page volume, published by Van Nostrand Reinhold, contains specific guidelines and case studies covering the whole gamut of toxicological hazards in occupational environments.

**John Nemeth** has been selected editorial advisor to *Occupational Health and Safety* magazine, and has agreed to write a monthly column for a new publication, *Environmental Management News*. **Charles**

**Calmbacher** has been named editorial advisor for the latter magazine.

**William Spain** presented a three-hour lecture on asbestos abatement techniques at the OSHA Training Institute in June.

Congratulations to **Bill Riall**, who earned his Ph.D. in economics from Georgia State University in July.

### ELECTRONICS & COMPUTER SYSTEMS LAB

At the June 16-20 Bioelectromagnetics Society meeting in San Francisco, **Jim Toler** chaired the Board of Directors' Membership Development Committee and presented a paper on "Bioeffects of High Peak Power Pulsed Millimeter Waves."

### ENERGY & MATERIALS SCIENCES LAB

**Charles Gorton** and **Jim Knight** attended the 7th Symposium on Biotechnology for Fuels and Chemicals, May 14-17, in Gatlinburg, where Dr. Gorton presented a paper on "Modeling Pyrolysis Oil Production in an Entrained-Flow Reactor."

### SYSTEMS ENGINEERING LAB

**Joanne Green** presented a paper at the 8th European Conference of the International Neuropsychological Society held in Copenhagen June 12-15. The paper was entitled "Response-related Factors Affecting Visual Half Field Studies."

On July 11, several presentations from the EW Program Review were given at Wright-Patterson AFB by special request from AFWAL management. **Lloyd Lilly** introduced the presenters: **David Flowers**, **Mary Ann Ingram**, **Jack Landgren**, **Don Lewinski**, and **Bill Youngblood**.

Congratulations to **Cathy** and **Walter Addison** and **Michael Kopp** on earning their M.S.E.E.'s in June.

## PERSONAL NOTES

### ECONOMIC DEVELOPMENT LAB

**Edd Valentine** recently returned to work after an emergency appendectomy which was performed the night before the cast was due to come off his broken arm.



Chuck Calmbacher, new head of EDL/EHSD's Hazardous and Industrial Waste Group, entertained at the division's picnic June 28. Activities included a lunch of fried chicken and homemade desserts, plus softball and volleyball.

### ELECTROMAGNETICS LAB

Laura and **Barney Jones** became parents of a boy, Paul Alexander, on August 7.

### ELECTRONICS & COMPUTER SYSTEMS LAB

**Margaret Matheny** was married to Larry Ray on July 6 in Naples, FL. The couple spent their honeymoon in Greece.

### ENERGY & MATERIALS SCIENCES LAB

**Everett Chapman** was married to Cherie Durden on June 29.

### RADAR & INSTRUMENTATION LAB

**Marvin Cohen** was married in July in South Carolina. He and his new wife, Mindy, honeymooned in Hawaii.

**Rob Michelson** and Denise have their first baby, a boy named Christian Michael. Judy and **Otto Rausch** have just added another member to their family, a boy, born on the 4th of July.

### SYSTEMS ENGINEERING LAB

The annual SEL summer family picnic was held on July 20. It featured a tennis tournament, lunch, softball and swimming at Murphey-Candler Park.

Susan and **Dick Ingle** had a boy, Richard Reeve, on July 20, and **Lloyd Lilly** became a grandfather for the first time when his daughter had a boy on July 25.



## Software Review

by Pat Mathiasmeier, RSTF

Symphony from Lotus is an integrated software program that combines five tools (spreadsheet, word processing, graphics, database management, and communications) in one package. All of Symphony's capabilities work together, allowing the combination of different types of information in a variety of applications.

RSTF has developed a series of seven courses to teach this powerful program. A one-day overview is provided for Symphony beginners. Half-day courses are offered on each of the five environments. An additional half-day session deals with integrating the five Symphony environments.

### Symphony Overview (S1)

The introductory course is designed for the beginning Symphony user with no prior experience on Lotus 1-2-3. Each of the five environments is introduced, and users receive hands-on experience. Prerequisites: None.

### Symphony Spreadsheet (S2a)

Spreadsheets are an integral tool for cost projections, accounting, budgeting, and project tracking. S2a covers the basics of the electronic spreadsheet. Concepts covered include data input and editing, multiple windows, planning and organization. Prerequisites: S1 or 1-2-3 experience.

### Symphony Word Processing (S2b)

S2b covers the text-handling capabilities of Symphony. Many advanced word processing features are available for entering text directly on the worksheet. Entering and editing text, establishing document formats, setting print attributes, and printing the text are included in the course. Prerequisites: S1 or 1-2-3 experience.

### Symphony Database (S2c)

A database manager allows information to be entered in one format and

retrieved in many different formats. S2c comprises setting up a database structure, using the FORM window to input and query database records, manipulating records within the database, and generating reports. Prerequisites: S1 or 1-2-3 experience.

### Symphony Graphics (S2d)

Graphs and charts make the numbers in a spreadsheet easier to understand, and make it easier to recognize patterns and trends. S2d includes how to make several kinds of graphs, including bar graphs, stacked bar graphs, pie charts, line graphs, XY graphs, and high-low-close-open charts. Prerequisites: S2a.

### Symphony Communications (S2e)

The communications capability allows access to other microcomputers, more powerful systems such as minicomputers or mainframes, and information services or bulletin boards. S2e covers how to set up your computer to emulate a terminal, how to use special features such as auto-answer and auto-dial, and how to use the Command Language to create keyboard macros, command word menus, and subroutines. Prerequisites: S1 or 1-2-3 experience.

### Integrating Symphony Environments (S3)

S3 covers extended, multiple-windowed electronic spreadsheets as well as text-handling and security features. More advanced integration concepts such as multi-windows and switching from text-embedded spreadsheets in the word processing DOC windows also are covered. Prerequisites: S1 or 1-2-3 experience.

More advanced Symphony, 1-2-3, and other courses will be offered on demand of a class of four or more persons. These courses may be made application-specific to solve significant and real tasks encountered by the Georgia Tech community. Additional courses under consideration at this time include:

- Graphics on Your PC—Beyond 1-2-3
- Small Database Solutions to Many of Your Scientific and Business Problems (based on 1-2-3, Symphony, dBASE II & III).

## Software Training Schedule

**Beginning Symphony (9-4:30):** Sep. 9.  
**Symphony Spreadsheet (1:30-4:30):** Sep. 6, 13.  
**Integrating Symphony Environments (1:30-4:30):** Sep. 20.  
**Symphony Word Processing (9-12):** Sep. 23.  
**Symphony Database (1:30-4:30):** Sep. 23.  
**Computer Literacy (9-4:30):** Sep. 10.  
**Beginning PROFS (10-12):** Sep. 6.  
**PROFS Scheduling (10-12):** Sep. 13.  
**PROFS Document Mode (10-12):** Sep. 20.  
**Advanced PROFS (10-12):** Sep. 27.  
**Communication (1:30-4:30):** Sep. 11.

**Beginning DOS (9-12):** Sep. 11, 19.  
 (1:30-4:30): Sep. 27.  
**Advanced DOS (9-12):** Sep. 26.  
**Beginning dBASE II (9-4:30):** Sep. 4.  
**Advanced dBASE II (9-4:30):** Sep. 24.  
**Beginning Lotus 1-2-3 (9-4:30):** Sep. 3, 30.  
**Advanced 1-2-3 (9-4:30):** Sep. 25.  
**Superproject (9-4:30):** Sep. 12.  
**LISP (9-4:30):** Sep. 16-18.  
**Volkswriter (1:30-4:30):** Sep. 19.  
**Beginning Wordstar (1:30-4:30):** Sep. 5.  
**Advanced Wordstar (1:30-4:30):** Sep. 26.  
 To register, call Research Software Training Facility, ext. 6206.

## PERSONNEL NEWS

### ECONOMIC DEVELOPMENT LAB

The Environmental, Health, and Safety Division (EHSD) welcomes Senior Research Scientist **Charles W. Calmbacher**, who comes from the Environmental Office of the U.S. Army Forces Command Headquarters, as the new head of the Hazardous and Industrial Waste Group, and **Janice Rutledge** as administrative secretary.

New faces in the Business Development Division are Research Associate **Wendi Dodd** and Administrative Secretary **Vivian Edwards**.

### ELECTRONICS & COMPUTER SYSTEMS LAB

ECSL welcomes two new research engineer I's: **Timothy Simerly**, who is joining the Communications Systems Division, and **Michael Walker**, who is joining the Computer Technology and Applications Division. Simerly recently received his M.S. in systems analysis from the University of West Florida and received his B.E.E. from Georgia Tech in 1981. He has worked for the U.S. Air Force at Eglin AFB and for the Harris Corp. in Fort Walton Beach. His work experience includes hardware and software design engineering and tactical algorithm development.

Walker, who recently was graduated from Georgia Tech with a B.E.E., was a research assistant in the Geophysical Sciences Department, working on the design, construction and testing of equipment used in atmospheric testing. While an undergraduate, he also worked at Scientific Atlanta as an engineering technician on a radar cross-section measurement system under construction.

**Andre Frech** has joined the Command and Control Division as a co-op, and **Mercedes Saghini** has transferred from Textile Engineering to the Electromagnetic Effectiveness Division (EED) as an administrative secretary. **Judy Post** has returned after a three-month absence and is now with EED.

Resignations include **John Mantovani**, **Wes Pidgeon**, **Len Cayce**, and **Beatriz Gonzalez**.

### ENERGY & MATERIALS SCIENCES LAB

**Bob Cassanova** has been selected as GTRI's Strategic Defense Initiative Coordinator, and will work 75% at OOD in this capacity; the remaining 25% will be spent on existing commitments in EMSL.

**Sharon Myster** has joined EMSL as administrative secretary to **Tom Starr**.

### RADAR & INSTRUMENTATION LAB

RAIL has a raft of new employees: **Dr. Jeff Holder**, senior research scientist; **Evan Chastain**, senior research engineer; **Melvin Belcher**, research engineer II; **Christie Belcher**, research scientist II; **Ruby Scheer**, research engineer I; **Tim Washington**, research technician I; **Betty Pope**, word processor operator; **Beth Floyd**, clerk typist I; **Mike Watt**, GRA; and **Dave Halprin**, co-op.

RAIL welcomes the following new employees to its New Jersey facility: **Mike Brinkmann**, research engineer II; **Thomas Emerson**, research technologist I; **Suzanne Chidiac**, programmer I; and **Brian Peters**, research technician I.

**Wayne Cassaday** and **Leslie Brown** have resigned.

### SERVICE GROUPS

**Computer Related Services:** **Suzan Wassman** is a new systems analyst whose responsibilities include managing the GTRI computer network. She received a bachelor of civil engineering from Georgia Tech in 1983, and plans to pursue a master's in information and computer science.

**Human Resources:** **Pat Burns** has resigned.

### SYSTEMS ENGINEERING LAB

Congratulations to **Mark Allen**, SEL employee of the month for June, who was cited for exemplary leadership of the Green Flag Program for the Tactical Air Warfare Center, Eglin AFB.

**Arline Farmer** has been promoted from administrative secretary to staff assistant in the Techniques Analysis Program Office.

**Shirley Woods** has assumed the division secretary position in the Defense Systems Division.

Two part-time workers in the Electronic Support Measures Division have gained full-time status: **Greg Wright**, engineering drafter I, and **Gary Reed**, electronics technician I.

**Gail Nickles** has joined the Defense Systems Division as an electronics technician I.

In the Concepts Analysis Division, **Wendy Furman** has been hired as a full-time systems analyst I, and **Suzanne Keiller** has terminated as word processor operator. **Cheryl Barnett**, formerly an administrative secretary with EML, has filled the word processor vacancy.

Resignations include **Donald Gordon**, **John Savage**, and **Tim Floyd**.

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Published monthly for employees of the Georgia Tech Research Institute

Vol. 1 No. 9 July—August 1985

Published by the Research Communications Office, Centennial Research Building, Georgia Institute of Technology, Atlanta, GA 30332. Georgia Tech is a unit of the University System of Georgia. Typesetting and printing by Walton Press, Inc., Monroe, GA.

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