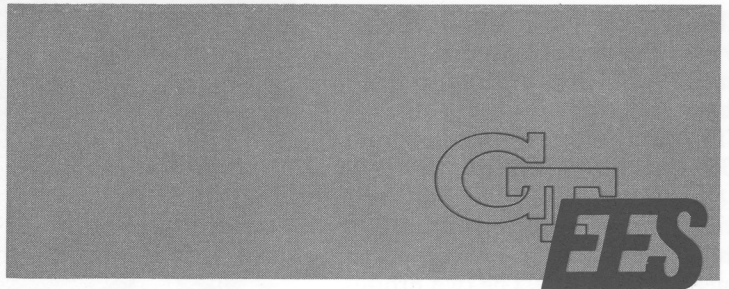


STATION NEWS



ENGINEERING EXPERIMENT STATION • GEORGIA TECH

VOLUME 6 NUMBER 9

OCTOBER, 1977

Schlesinger Visits Tech

President Jimmy Carter's Secretary for the U.S. Department of Energy Dr. James E. Schlesinger was on the Georgia Tech campus September 16 to examine research being conducted in the area of alternative energy sources.

Following an energy seminar sponsored by the Georgia Business and Industry Association (GBIA), Schlesinger visited the 400-Kilowatt Solar Thermal Test Facility, the gasifier and viewed the pyrolysis process.

Following the tour of the three facilities, a three-hour briefing session was held at the home of Dr. J. M. Pettit. Georgia Governor George Busbee, President Pettit and Vice President for Research Thomas E. Stelson informed Schlesinger of Tech and the State of Georgia's involvement in alternative energy research.

At the GBIA meeting, Schlesinger described the nation's dilemma concerning the current energy problem. He said, "We have seven or eight



Vice Pres. for Research, Dr. Tom Stelson, escorted Secretary Schlesinger on recent visit to new Tech Solar Power Tower.

years of grace. We can wait and go over the edge of the cliff or adopt a comprehensive, vigorous national program of conservation and American energy development."

EES Receives Poultry Research Extension

The Georgia Department of Agriculture has provided EES with an additional \$230,000 in funding for a one-year extension of a poultry industry research program first begun in 1973.

The additional funding allows EES to continue research projects in energy conservation, waste utilization, solar energy application and mechanization in the poultry industry.

According to program manager **Jim Lowry**, EES will be working in conjunction with the Georgia Poultry Federation to improve the overall productivity of the poultry industry. "We'll be applying the most up-to-date technologies available to upgrade the industry's operations," Lowry said.

The Georgia Poultry Federation represents Georgia poultry producers in obtaining funds for statewide industry improvements.

The agreement also adds a new project to the 1976 list — industry

wastewater treatment. Government regulations require industries that discharge wastewater to limit the amount of pollutants in the water before discharging it. EES will assist the poultry industry and consultants from the engineering community in meeting federal guidelines in this area.

Work currently being done by EES in the poultry industry includes converting chicken manure into methane gas, heating broiler houses with solar energy, improving the methods for packaging chickens for market and recommending ways in such areas as lighting, ventilation and processing.

Publicity For EES

During the September 23-24 Fernbank Science Fair, EES was represented in the "Alternate Energy Sources" exhibit at the museum. SEMTD draftsperson (?) **Martha E. Clayton** plays an important role in such displays since her impressive Solar Thermal Test Facility model draws much interest from viewers. Student assistants **Rick Waring** (OOD) and **Kent Carr** (ASL) transported the materials to and from Fernbank for the Publications and Info Office. **Sharon Sebal** organized the display.

EES also participated in Georgia Tech Activities Day September 16 with a colorful display featuring research at the Station. Student assistants **Rick Steenblik** (SEMTD) and **Scott Ward** (ASL) carried and manned the exhibit and afterwards commented that quite an interest in EES from Tech passers-by was generated, especially in the solar energy field.

TDL News

The T&D Lab added more than 13 new staff members last month and commandeered a new floor to accommodate them.

The newly acquired 14th floor of the C&S building will house most of the new personnel who will be working on two projects recently contracted by TDL's Energy and Engineering Division. The two projects are the State Energy Conservation Program and a Department of Agriculture-funded poultry research project.

The energy program, headed by **Bill Studstill** and funded through the Office of Energy Resources, has four new staff members — **Walter 'Bo' Hendrix**, **Bill Moran**, **Dave Wade** and **Lawrence Moriarity**. Moriarity and Hendrix work primarily with textiles and chemicals, Moran with stone and clay and food and kindred products, while Wade is the coordinator of the food and related products division. **Michael Smith** is a cop student working with this program.

New staff members working on the \$230,000 poultry project are: **Dale Atkins** and **Bob Cassanova**, industry mechanization; **Randy Mattison**, wastewater treatment and energy conservation; and **John Giles**, solar energy. **Erling Bronn** will provide part-time assistance.

Atkins and Cassanova are also working with a \$46,000 National Science Foundation grant studying mechanization in the poultry industry.

Other new personnel include **Dan Mazzeo**, **Eli M. (Dan) Dannenberg**, and **Mehendra Bery**. Dannenberg is in applied carbon technology research, primarily rubbers and polymers, and Bery will be directing projects in biomass conversion. Both work for **Dan O'Neil** in CMSD.

Mazzeo, an assistant research engineer, will be doing research in energy conservation for the electroplating industry.

Also new on the TDL staff are **Peggy Simcic** and **J.B. Shaw**. Both will be doing writing and public relations work for the lab.

TDL's Energy and Engineering Division has also received new secretarial support. **Pat Toomey**, who



Don Grace tapes initial EES radio program at Tech station WREK.

EES On the Air

On 27 September the Ga. Tech radio station WREK (FM 91.1) began a new series of short interviews with EES staff about various research activities. The first program featured Don Grace.

The series is produced by Darryl Pierce, WREK News Director, and has Sharon Sebaly of the Publications and Information Office introducing and interviewing individuals such as Don Grace, Frank Tully, Steve Havlicek, J.D. Walton, Jim Knight, Dr. Stelson — and others yet to be taped. The program is every Tuesday and Thursday at 5:30 or 5:40.

The show made a good beginning, and plans are not only to extend it but also to make tape copies for wider distribution. Individuals with projects to "air," — call the P&I Office, x 3405.

transferred from ERB is working for **Jim Lowry**, and **Rosemary Miller** from Gainesville, Florida is assisting Studstill's staff.

ASL

At its recent annual meeting at Augusta, Ga., 21-24 August, the Georgia Water and Pollution Control Association elected **Dr. T.F. Craft** to be their second vice-president. Congratulations, "T.F."

IPO News

Ross Hammond delivered a paper on "The Future Prospects of International Transfer and Diffusion of Technology for Small Business" at the Fourth International Symposium on Small Business, sponsored by the Korea Federation of Small Business, in Seoul, Korea, October 10-13. His trip also included project development activity in both Korea and the Philippines.

Kermit Moh was in Los Banos, Philippines, October 3-14, participating in a two-week training course at the International Rice Research Institute (IRRI) on IRRI agricultural machinery design and manufacturing.

Harlan Davis visited Soong Jun University in Korea October 7-15 in connection with the AID Small Industry Grant. His itinerary also included the Philippines, where he visited IRRI and the Institute for Small-Scale Industries under AID 211(d) grant auspices.

Kay Auciello was in Washington, D.C., September 12-14 to plan for the final week of training for IPO's Indonesian Associate Residents, to talk to AID officials and to attend an Advanced Course in Lockheed Dialog on-Line Retrieval Techniques.

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Maggi Rampling	3523
Mary Ann Clarke	3507
Martha Ann Stegar	3873
Marilyn Huber	3500
Mary Ann Mayo	3414
Linda Beasley	3552
Peggy Simcic	3623
Lanita Solomon	3505
Barbara Cartledge	3703
Albert H. Becker, Reproduction	3570

S&TL News

The Electronics Research Building personnel outdid themselves in a show of affection at a recent luncheon for departing **Pat Toomey**, their receptionist. More than 60 of her co-workers and friends turned out to share a meal with Pat and give her a gift and a shower of well wishes. Her friendliness and competency on the job will surely make her missed.

An unusual announcement was on the Systems and Techniques bulletin board the other day. Thumbtacked to a formal engraved invitation to the wedding of **Bruce A. Lafitte** and **Daria Jones** was a "for sale" notice. Bruce was attempting to sell two Tech-Air Force Football tickets for the game occurring on the same date. He had added (unnecessarily), "I'll be busy that day!"

During September S&TL welcomed new employees: **Jim Higgins**, Research Engineer; **Rhonda Yearwood**, secretary shared by Mechanical Development and Electronics Development Branches; **Doug Guilory**, **Jim Cook**, **Ken Rosenberger** (George's "little brother"), **Sam Taylor**, all co-ops; **Charles Albert**, Electronics Technician; **Robert Crouch**, Student Assistant. Also welcomed were **Gene Griffin** and **Mike Flynn** as full-time employees.

A number of the SDD and XM Program Office staff were on the move visiting project sponsors and commercial vendors (subcontractors) in conjunction with sponsored R&D programs.

Systems Development Division continued its reorganization efforts during the month and established the following subunits:

Mechanical Development Branch — W.J. Dittman, Head

Electronics Development Branch — C.L. Hilbers, Head
RF Development Group — G.R. Whitley, Acting Group Leader

ETL News

Richard Moss and **Bob Rice**, CTG, along with **D. L. Kelly** of SED were in Washington, D.C., October 21 to conduct technical negotiations on a possible contract with the FCC. Moss and Rice also attended a progress review meeting on a current FCC study.

ETL welcomes **John Wood**, ARE. John is from Nashville, Tennessee, and will be working in the Communications Technology Group.

Sandy Brickey is the new secretary in the EMC Group. She came from Continuing Education.

WEARY QUERY

**We're now sure what we do
Cause it's all written there
In the credulous challenge:
The Hay Questionnaire.**

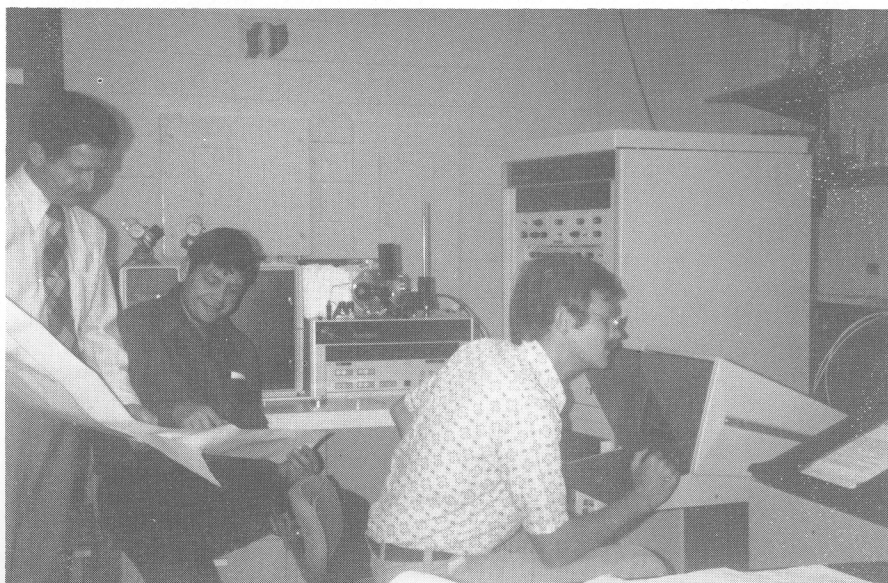
Adventures With Babe

Lee Edwards, Chief of Antennas and Countermeasures Division, S&TL, along with **Harry Andrews**, **Bill McJunkin**, and **Kerry Bedworth** returned on September 6 from a visit to the Air Force Avionics Laboratory, a project sponsor at Wright-Patterson Air Force Base, Dayton, Ohio, where they had demonstrated the EES Convair 240 Airborne Lab to some of our interested sponsors. Hurricane Babe was blowing herself out in the Gulf when the EES group took off for Atlanta. They soon found themselves completely enveloped in a very heavy cloud front. Though navigational aids kept the plane on course for Atlanta, the uncertainty of flying into such a storm kept the occupants tense for about an hour. A weather radar, which could identify such dangerous thunderstorms, had been previously discussed as a desirable addition to the plane's equipment. After the trip, a request for this radar was promptly written!

SED News

Larry Holland presented a paper entitled "A Cost Benefit Methodology for Space Communications Technology Steering" at the IEEE Seventh International Conference on Cybernetics and Society in Washington, D.C., on September 19.

Drs. J. W. Ralls, S. C. Havlicek and L. W. Stratton examine drinking water data produced by the Applied Sciences Laboratory's new GC/MS system. This new facility is available for use in solving pollution-related problems for industry, state and local government as well as for use in connection with federally sponsored projects. Its acquisition represents a major step forward in Georgia Tech's capabilities in dealing with problems in environmental research.



RAIL

Bob Hayes and **Jim Metcalf** visited the National Research Council of Canada (NRC) in Ottawa and the Alberta Hail Project Field Site (ALHAP) in Red Deer, Alberta, in late August to discuss polarization-diversity radar techniques in meteorological research. NRC is using these techniques to determine microwave propagation characteristics of precipitation, and ALHAP is using them for detecting hail in severe storms.

Eddie Martin, Head of the Software Development Branch visited Yale University to discuss a joint research effort among Yale, the School of ICS at Georgia Tech, and EES. The research would involve parallel development of prototype test program exercisers: one for FORTRAN, to be developed at Yale, and one for COBOL, to be developed at Georgia Tech. The objective of the program exerciser is to provide an indication to programmers of the degree to which a set of test data actually tests their programs.

Jim Scheer, **Jerry Eaves** and **Nick Currie** participated in a planning meeting at Eglin AFB in Florida for millimeter seeker flight tests.

Jim Scheer attended EASCON at Arlington, VA, and presented a paper on "Modern Millimeter Wave Instrumentation Radar Development and Research Methodology."

Nick Currie and **Lucien Bomar** visited Ft. Collins, Colorado, in September for technical discussions on the millimeter snow measurements.

George Ewell was at Panama City, Florida, for a WIDS program planning session.

"Major" **Ed Reedy** spent two weeks on active duty at ERADCOM in September, serving his country while actively pursuing contract development for EES.

When RAIL came into being earlier this year, its secretaries came in various shapes and sizes from the former AE and S&T Laboratories. In order to get to know one another better and to coordinate their work in the new Lab, they started having informal meetings.

As RAIL continued to grow rapidly, these meetings continued on a regular, monthly basis. These meetings have become useful for passing information along such as



Left to right are (seated); Susan Fuller, Alice Moore, Carol Kelley and Lee Jansen; (standing) Mary Margaret Evans, Maggi Rampling and Ginny Gross. Missing is Shirley Busby.

changes in lab procedures, adoption of new policies and working out any problem areas, thus achieving a closer and more uniform working relationship.

The secretaries in RAIL are: **Shirley Busby**, **Mary Margaret Evans**, **Susan Fuller**, **Hazel Gaines**, **Ginny Gross**, **Lee Jansen**, **Carol Kelley**, **Alice Moore** and **Maggi Rampling**.

The Radar Development Branch is assembling instrumented radar vans for demonstration of the Army's Battlefield IFF System and the Air Force's Intrusion Detection system for the MX Bases. Both vans will contain minicomputers, computer peripherals, radar interface electronics, test equipment and air conditioning. Modified versions of the PPS-5 radar will be used with each van. The van will be moved to the test site in February, 1978, for two to three months of testing.

New Booklet on Waste Research

Waste Not — Want Not, a booklet on research at Georgia Tech, has recently been published by the Publications and Information Office. It is authored by **Sharon Sebal** and designed by **Jim Donovan** and is available on request. Call x 3405.

New Employees

Shirley Washington has started work as **Jerry Eaves'** secretary. Shirley was born in Mobile, Alabama. She previously worked at the Hillcrest Clinic and Counseling Services.

David Ladd, an ARS, comes from Franklin, Georgia. **Michael Branz**, a student assistant, started work in the Development Branch. The following are co-ops who are new this quarter: **Rick Folea**, **Rick Gay**, **J. Holton**, **P. Rogers**, **S. Thomas** and **S. Edwards**.

John Peifer, an ARS, from Austin, Minnesota. John was a member of the University of Georgia Soccer Club from 1972-1977.

L. Patrick Elam, an ARE, is from Augusta, Georgia. **John Scoville**, an SRE, came to Georgia Tech from Cadre Corporation. Co-ops hired by TDA this quarter are: **Vince Kegel**, **L. Larrew**, **E. O'Brien**, **D. Sanford**, **R. Trussell**, and **N. Dempsey**.

Johnson Chosen IEEE Distinguished Lecturer

Dick Johnson was chosen as one of four distinguished lecturers for the IEEE Antennas and Propagation Society. As a distinguished lecturer, he will be asked to attend various chapter meetings around the country to deliver talks as a representative of the Antennas and Propagation Society Administrative Committee.

EDD Activities

The U.S. Economic Development Administration has renewed for a 13th year their contract with EDD for the University Center program. The \$75,000 grant from EDA is matched with \$25,000 from Georgia Tech to provide technical assistance to business and industry in 154 designated EDA counties in Georgia. **Hardy Taylor** continues as project director with **Charlie Womack**, **Bill Howard**, and **Harvey Diamond** making up the team.

The National Science Foundation, through the Georgia Department of Community Affairs, has approved approximately \$65,000 for the Economic Development Division's cooperative part in the "Georgia Innovation Group." **Doris Willmer** is project director for EDD's portion of the 18-month project. The other participants will be Georgia State University's Institute of Governmental Administration and the University of Georgia's Institute of Government. The purpose of the program is to investigate an innovative coalition of state government and multi-disciplinary, multi-university resources as a method for providing improved levels of service in individual local governments and groups of governments.

The Appalachian Regional Commission, through the Georgia Department of Education, has recently approved a grant of \$36,000 to support a project entitled "Energy Conservation and Management in Vocation-Technical Schools." The EDD project to be headed by **Doris Willmer** has a team consisting of **Bob Kutas**, **Gary Lochmund** and **Grant Curtis**.

Willie Coleman, a previous Georgia Tech employee, has returned to Tech as secretary of the Industrial Services Group of EDD.

Marva Schoening, a Georgia Tech Student Assistant, has returned to work at EDD after having done programming at the General Motors Technical Center in Warren, Michigan this summer. Marva is also a GM-Scholar.

C.M. Thompson, a graduate student at Atlanta University and a member of the Governor's Intern Program has begun working with **Ed Bethea** on Ed's two OMBE projects.

Judi Komaki presented an

initial address entitled "Improving Occupational Safety Using the Applied Behavior Analysis Approach" to the September Public Agencies Safety Conference in San Francisco.

Bob Cassell participated in the Tri-State Development Seminar of Iowa, Illinois and Wisconsin which was held in Dubuque, Iowa, September 23. Bob also went to Norman, Oklahoma to participate in the curricular planning for the 1978 Industrial Development Institute.

Dr. Tze Chiang attended the Educational Seminar and Exhibition of the National Association of Food Equipment Manufacturers which was held September 24-27 at the Louisiana Superdome in New Orleans.

Ed Bethea attended the National Business League Conference held in Norfolk, Virginia, from 28 September to 1 October.

Bob Cassell and **George Dodson** have returned from Norman, Oklahoma, where two symposiums, "I.D. Financing: Problems and Solutions" and "Non-Metro Economic Development," were presented by the University of Oklahoma and American Industrial Development Council. Bob directed the symposium on I.D. Financing and made a presentation at the second symposium.

A paper prepared by **Terry Connolly** (IE) and **Lee Burks** under an NSF grant and titled "Women in Science and Engineering: Characteristics and Experiences of Established Professionals" has been accepted and will appear in the annals of Engineering Education.

EML News

The EML football team defeated the team from the first floor of the Baker Building 6-0 September 16 during adverse weather conditions (rain). Among the many team stars, quarterback **Chris Bowick** stood out as the brightest.

EML regrets losing **J.B. Langley, II**, from its staff. John has accepted a position with TAC for the rest of the year, and he will begin working on his Ph.D. at University College, Cork, Ireland, around the first of the year. Congratulations and good luck from EML!

Effective Vu Graph Transparencies

Transparencies can be made more readable by:

- Limiting copy
- Dividing copy into 2-3 transparencies instead of overcrowding one
- Using the Orator typewriter face
- Doing block lettering with felt-tip pen
- Using headliner when only a few words are needed
- Having copy set in bold face type and enlarging photographically to size desired

The Publications and Information Office can assist with the design and production of transparencies of better quality than are being done on the office copiers. Call 3405.

Production time of 1-2 days should be planned for good transparencies.

Ceremonies Mark End of Indonesian Residency

It's hard to say goodbye to friends, and the IPO staff found this to be true as they bade farewell to their 18 Indonesian friends at a luncheon and graduation ceremony at the Sheraton September 30. **Don Grace** awarded the certifications for completion of the three-month "Associate Residency Training Program for Technical Information Specialists"; **Kay Auciello** was Mistress of Ceremonies, and **Marvin Harm** delivered the graduation address. Also attending the affair were representatives of the Georgia Tech Library and other libraries in the Atlanta area who had assisted with the instruction.

Among several parties given in honor of the Indonesians were two which included the entire IPO staff. A covered dish picnic was held in **Judy Cadman's** backyard at Stone Mountain September 18, with dramatic entertainment provided by Judy's daughters and the neighborhood kids, and disco dancing led by the Indonesians and other guests. **Ross** and **Faye Hammond** hosted a barbecue at their home in Dunwoody September 23.

Continued next page —



Secretary Schlesinger, Governor Busbee and President Pettit concentrate on the EES pyrolysis unit during the Secretary's September visit.

Continued —

Kay Auciello and **Marvin Harm** accompanied the Indonesians to Washington October 1-8 for a final week of field trips to libraries and a wrap-up of the program, which was sponsored by the Agency for International Development. The group visited the Library of Congress, National Agricultural Center, National Library of Medicine, University of Maryland, National Technical Information Service and the White House.

Inter-University Program To Study Local Government Problems

A recently funded program by the National Science Foundation will permit three major institutions — Georgia Tech, Georgia State University and the University of Georgia — to team up with each other through the Georgia Department of Community Affairs to give technical assistance to local governments having problems.

This inter-university approach will address problems which continue to plague cities and counties across the state because of the expense involved in finding and providing solutions. In announcing the program, Governor Busbee commented, "I am delighted that one of my pet projects in the area of

beefing up State assistance to local governments has been funded by the federal government."

The program involves the Department of Community Affairs' receiving requests for help. Then a Task Force matches requests with the faculty and staff resources available, and an advisory committee of local government officials will help decide which projects will be dealt with during the first year of federal funding. Some potential problem areas that have been identified to date are: energy conservation and management; increased productivity in all government service areas; solid waste, water, sewage and sanitation management; fleet operations; vandalism and juvenile crime; and alternative reserve sources. Training programs for first line supervisors, county officials, and municipal personnel are also under consideration by the Task Force.

The Task Force is composed of the Department of Community Affairs and units of the three State universities — the Engineering Experiment Station, the Institute of Governmental Administration at Georgia State University and the Institute of Government and the Cooperative Extension Service of the University of Georgia. The group was formed more than a year ago with the Georgia Municipal Association and

the Association of County Commissioners of Georgia as advisory members.

The advisory committee of local government officials includes six mayors, six city managers, one county commissioner and one county administrator.

According to the EES project director **Doris Willmer**, "This project will provide funds to solve problems in local governments to effect more efficient delivery of services at the same or lower cost. To accomplish this goal, approximately three major problems will be attacked each year. Short-term problem solving will also be a part of the overall effort.

EEAD

Jeff Tiller returned to work in ASL after cavorting around Eastern Europe and the Soviet Union this summer on a YMCA program. Although he had two books confiscated at the Russian border, was almost arrested for sitting at the base of a statue of Good King Wenceslas in Prague and, with his Armenian friends, was pursued by angry peasants in the Caucasus Mountains, Jeff thinks the trip was a real success — "perhaps the best experience of my life."

He says, "There were two main types of impressions I gained. First was the sense of history that pervades the countries. The most obvious signs of heritage are the old buildings, statues and other cultural monuments, many of which date back to the 12th and 13th centuries. The other main impression is of the people. For the most part they are good-natured, extremely generous and very friendly toward Americans. Their historical heritage has etched itself in many of their faces. People often live in the same town as their parents, grandparents, great-grandparents and more distant ancestors. One Polish man said to me, "People here approach a problem in a completely different manner from you Americans. When you see a problem, you try to figure out how to solve it and get on to the next problem. We learn to adjust ourselves to it. When faced with a dilemma, you look to the future; we look to the past."