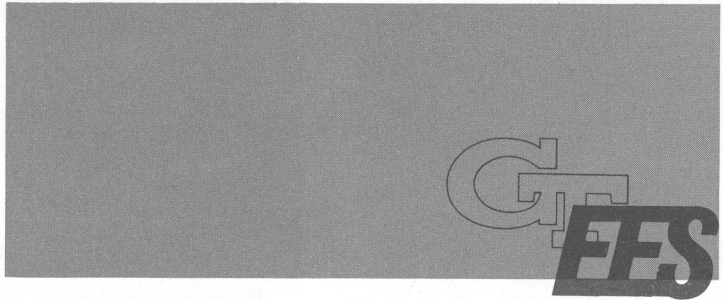


STATION NEWS



ENGINEERING EXPERIMENT STATION • GEORGIA TECH

VOLUME 5 NUMBER 4

MAY, 1976

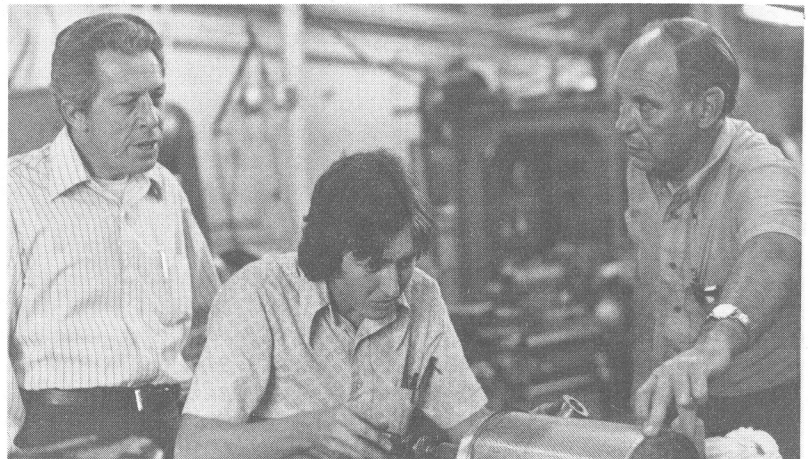
EDL To Hold Mini-Conference in the Philippines

EDL is conducting a Mini-Conference on Adaptive Technology and Small Industry Development in Manila, May 26-29 under the Georgia Tech institutional grant from AID. The Institute for Small-Scale Industries at the U. of the Philippines is hosting the event, which will focus on the activities of Tech and its counterpart institutions in Africa, Asia, South America and the Philippines.

Attending from EDL and EES, will be **Don Lodge**, who is the conference coordinator, **Ross Hammond** and **Howard Dean**. Joining them in Manila will be two EDL staff members who are working on a rice farming machinery project overseas: **Ken Stephens** will be coming from Thailand and **Phil Hess** from Pakistan.

Director Selected

An offer has been made to Dr. Donald J. Grace, to assume the position of Director of the EES. At this time, it is anticipated that Dr. Grace, who is currently Director, Center for Engineering Research at the University of Hawaii, will accept the offer. He is making another visit to Tech and EES during May and if plans follow on schedule, the new Director could be on board by early August. We will carry a more detailed report on Dr. Grace in the June issue.



Harold Huey (L) and James Dameron (R) observe Robert Hawkins (center) welding a filter for the waste utilization plant.

EES Mechanical Services

The EES Central Machine Shop is one of the busiest service groups within the Station. From 8 to 4:30 you can stop by the shop, located in the lower section of the Hinman Building, and gaze in awe at the impressive array of industrial machines... trying to imagine how a flat piece of metal became a radar scanner? Or a Solar Steam Boiler?

The man who can answer these questions is Harold W. Huey, head of the Mechanical Services Group. Huey joined the Shop in 1950 and took over as Administrative Specialist, replacing Dan Thomas in February, 1975. Huey's group is one of several service groups that report to Howard Dean, Associate Director for Programs and Services, and Coordinator of Services, Ms. Betty Yarborough.

Huey's division consists of 17 experienced machinists divided into two subgroups. James D. Dameron is leader of Group No. 1 and John W. Coker leads Group No. 2. These

three top men have a combined service in the Shop of some 80 years experience. Dameron has 28 years while Coker and Huey are in their 26th year with the organization.

The Machine Shop devotes about 90 per cent of its efforts to EES work and the remainder to serving the academic departments of Tech. During the last fiscal year, they completed over 300 job orders from the various departments and divisions.

About half of their work is involved with fabrication of electronics research and test instruments, machines or models. They have completed major projects recently related to solar research such as the solar steam boiler for test at the solar furnace in France, and also built several radar scanning systems and mechanisms for AEL and S&TL.

Work projects are assigned to one of the two shop groups made up of seven men each. Both groups have similar skill capabilities in that the

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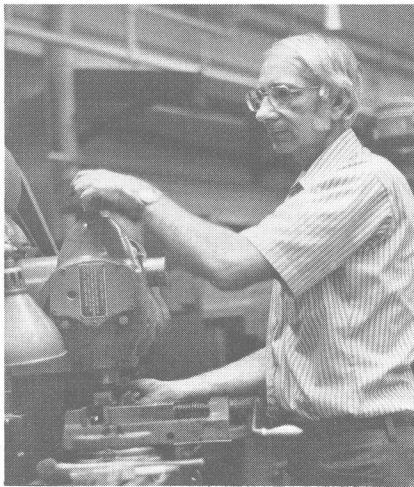


H. Huey and David Keller on one of the many machines in the Shop.

men are trained to operate all of the 60 varied shop machines. Several of the men also specialize in welding. Some jobs take only a few days . . . others such as the waste conversion unit and radar scanning systems, require many months. Working time is charged to the appropriate project.

Harold Huey says the shop has no special problems at present. They have the basic tooling to perform most all types of tasks. Sometimes the work load presents problems of job priorities.

According to Huey, the shop offers an apprentice training position which



Gene R. Dixon of the Machine Shop working a milling machine.

is currently filled by Robert Hawkins. At present, there are openings for several additional machinists and efforts are underway to fill the positions.

The Central Machine Shop is a productive and interesting place to work; well equipped, neat and organized. Anyone interested in viewing the machinery can drop by the Hinman Building and see a wide variety of work and a variety of equipment from a 10 ton overhead crane to a large and small lathes, drills or cutting tools.

Savannah Office Hosts Tour

The Savannah area EES office, headed by **Larry Edens**, was host to visiting EES/Tech personnel for a three-day tour.

Those EES officials participating in the tour included: **Dr. Tom Stelson**, vice president, Research; **Ben James**, chief, Area Development Division; **Dr. Dick Johnson**, associate director, EES; **Bill Borchert**, vice president, GTRI, and **Ross Hammond**, director, EDL.

The group visited manufacturing plants and businesses in Claxton, Glenville, Baxley and Brunswick — cities where EDL had extended its service and aided in economic development.

According to Ben James, "This is the first time the area offices have been visited on such an extensive basis. Our representatives have worked hard over the past years, building and expanding the business communities and the economy of cities in their areas. Now they have the opportunity to display and reveal the results of those efforts."

Professional Staff Development

Dr. Eric W. Walker, distinguished engineer and scientist will visit the Georgia Tech campus, July 12-13, to inaugurate a series of lectures/seminars for the EES professional staff. Dr. Walker will present subjects on self-development and prevention of professional obsolescence.

S&T News

Nick Currie along with **Clark Butterworth** and **John Barkshadt** went to Steamboat Springs, Colo. to make radar studies of the snow, for the Air Force.

Congratulations to **Ross Gagliano** who received his PhD from GIT in March. Ross is employed as a Research Engineer in the Advanced Sensors Division of the S&T Lab.

Ed Reedy and **Bob Hayes** visited Fort Sill, Okl. on April 6 to discuss progress on studies of radar systems for the Army. **Jim Cofer** and **Larry Sikes** made visits to several places for technical presentations and contract development April 26-28. They visited APL, the Navy's White Oak Labs, the Office of Naval Research, NAVEX, Harry Diamond labs, and the Navy's Program Office for Surface Effects Ship.

Study Pyrolytic Converter Potentials in Ghana

Tze Chiang, EDL, and **John Tatom**, P/TAL, were in Ghana April 17-May 8 to conduct an investigation into the feasibility of pyrolytic conversion of agricultural wastes under contract with aid. Dr. Chiang was in charge of the economic side of the study: availability of raw materials, production costs, markets and preliminary project returns. Dr. Tatom was responsible for engineering and hardware: determining what capabilities exist in Ghana for construction of a pyrolytic converter, how labor intensive it should be, whether it should be a fixed or mobile unit, and other factors leading to the design and engineering of a model to fit Ghanaian conditions.

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Published monthly for employees of the Engineering Experiment Station, Georgia Institute of Technology, Atlanta, Georgia 30332.

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Solar Energy Projects Planned

As a result of the visit of **Tom Stelson** and **Ross Hammond** to Korea last fall, the Korean Institute of Science and Technology has contracted with EDL for aid in the design of a long-range solar energy program for KIST and the specific design of a demonstration solar space and water heating system for installation in a Korean residence.

Edwin Lewis will be in Korea for three weeks in May and June discussing possibilities for joint solar energy activities with Soong Jun University. He will be joined by **Ross Hammond**, **Don Lodge** and **Howard Dean**, who will consult on both the KIST and SJU projects. While at the Manila Mini-Conference, they also will explore the possibility of interaction with the National Economic Development Authority of the Philippines on another solar energy program.

Energy Conservation Seminars

Representatives of the Georgia Productivity Center, PTAL, **Grant Curtis**, **Joan Wood** and **Ron Pearl**, recently completed a series of seminars on "Energy Conservation in Existing Buildings."

The courses were held in Savannah, Columbus, Augusta and Macon during the month of April.

The one-day seminars featured energy conservation tips researched, by the PTAL representatives, dealing with efficiency of space heating and cooling in buildings.

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National Secretaries Week

Dr. and Mrs. Joseph M. Pettit invited all Georgia Tech Secretaries to their home for a reception April 22. The reception was in honor of National Secretaries Week. Dr. and Mrs. Pettit personally welcomed everyone at the door. All were invited to browse through the house and garden. EES Secretaries wish to thank Dr. and Mrs. Pettit for an enjoyable afternoon.

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Sinclair Wins Computer

Mike Sinclair was the recent winner of a computer kit from the Computer Center in Atlanta.

Sinclair and fellow EES employee, **Jim Stratigos**, both members of the Atlanta Area Computer Hobbyist Club, were invited to participate in the store's recent grand opening by displaying their model computer which plays the theme song "Rambling Wreck..."

The following evening Sinclair received a phone call announcing him the winner. "I thought it was a joke," he commented, "and hung up on them." But the store owner persisted and convinced Sinclair that the \$500.00 Altair Computer kit prize was his.

ASL

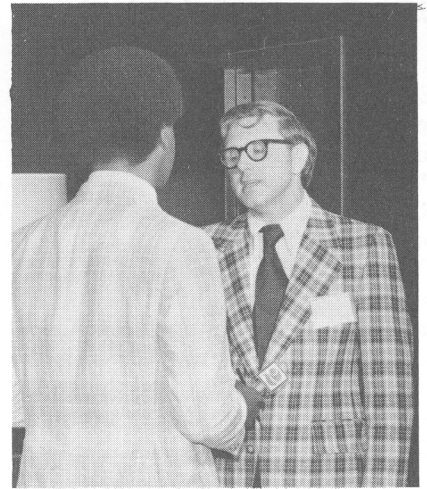
P. E. Mackie, **Derrold Holcomb** and **R. A. Young** of the Applied Physics Branch, attended the International Association of Dental Research meeting, March 25-28, at Miami Beach, where Young served as a session chairman. Holcomb presented a paper on "Hydroxyapatite Variability Shown by Deuteration." The co-author, Young, was in New York at the time the paper was given, attending a meeting of the Governing Board of the American Institute of Physics.

On April 15, **T. P. Lang** and **R. M. Ahrens** gave a seminar entitled "Low Energy Experiment to Measure a Weak Coupling of the Neutrino Current" at the National Science Foundation in Washington, D.C.

The Applied Physics Branch had a cocktail party on Saturday April 5th at the home of Dr. R. A. Young. No special occasion, just want to keep our people happy!! Everyone seemed to have a *good time!!*

John Brown attended the Scanning Microscopy Symposium in Toronto, Canada, April 5-8.

Wayne Cooper, assistant research scientist, is completing work at an underground simulated solar furnace at Kirtland Air Force Base in Albuquerque, N.M. Wayne is assisting Charles T. Brown, project director of EES SE and TM Div.



John Tatom of PTAL being interviewed by WSB-TV reporter at the Energy Food Plantation Conference held at Tech April 4-5.

EES Amateur Radio Club

An Amateur Radio Club for EES Staff members has been organized by **Alan Bridges** (X3470 Baker). Ham radio operators and those who wish to earn a Ham radio license are invited to attend the group's first meeting scheduled for Thursday, June 3 at 7:30 p.m. in the Baker Building auditorium.

Surplus equipment within the Station will be available for use for the Ham operators, and licensed members will arrange volunteer classes to help prospective members learn the radio code.

Hinman Building Renovation

Three offices have been completed in the newly renovated Hinman Research Building. EES personnel including Associate Director for Programs and Services, **Howard Dean** and his secretary, **Sis Hancock**, are now located in room 317, while Associate Director **Dick Johnson** and his secretary, **Ann Mintz**, are getting settled in room 321.

The third office has been completed and will be occupied by the EES Director when appointed.

Additional remodeling planned for the balance of the tri-level building will begin in June, reports Facilities Manager, Tom Jones.

EDL Reports Published

Tze Chiang and **Frank Kingsland**, EDL, are the authors of a 250-page report on "The Feasibility of Establishing Thermo-Mechanical Market Pulp Mills in the Coastal Plains Region of the United States." It was prepared under contract to the Coastal Plains Regional Commission with participation by the Southeastern Lumber Manufacturers Association. Raw material for such a mill would be surplus wood chips and wood residues generated by sawmills in the region.

"Alumina from Kaolin Environmental Considerations" is the latest report in EDL's ongoing study of the feasibility of and requirements for development of an alumina-from-kaolin industry in Georgia. The report was prepared by **Bill Ward**, EDL, and **John Husted**, ASL & ChE Prof., for the Georgia Bureau of Industry and Trade under a grant from the Coastal Plains Regional Commission. It is a compilation of relevant environmental regulations concerning mining and processing, as well as the procedures which must be followed by companies seeking permits from governmental agencies.

Civil War Buff

Collecting Civil War memorabilia has been a hobby for **Tom Jones** since 1974. His collection is so extensive that during a recent showing of the Civil War Relic Hunters Association in Marietta, he was asked to present his collection during a Bicentennial show to be sponsored by Dobbins Air Force Base in June.

Jones' collection includes belt buckles, bayonets, rifle pieces, bullets, horseshoes and artillery fuses, and over 200 buttons.

With the use of a metal detector, Jones is able to uncover items from 10 to 30 inches underground.

ET Lab

ETL welcomes new employee **Donald E. Clark**. Don moved here from Sterling, VA. He is a Research Engineer in the Electromagnetic Compatibility Group.

EDL News

Kay Auciello and **Ed Bethea**, EDL, were among the 51 students enrolled in the Basic Industrial Development Course which was held on the Tech campus April 11-16. **Bob Cassell** was the course director and **Bill Howard** was on the faculty.

Nelson Wall, EDL, is in Tubarao, Brazil, April 17-May 15, assisting the Educational Foundation of Southern Santa Catarina with its ongoing program of assistance to small rural industry under a Small Industry Grant from the U.S. Agency for International Development.

Jim Knight, head of the Waste Utilization Lab gave a paper on "System for Converting Wood Fuels to Char, Pyrolytic Oil and Combustible Gases" on April 8 at the workshop on Wood Residues; an alternate Energy Source for New England Industry held at U. of New Hampshire in Durham, N.H.

Bicentennial 1776-1976



Two Researchers Join PTAL

PTAL welcomes two new members to the staff. Joining the Productivity Systems Group as a Research Engineer is **Robert H. Fulford**. Fulford holds a BS in Engineering Science and Mechanics from U. of Florida and is experienced in energy conversion systems.

Joining the staff as Principal Research Scientist is **Stanton B. Smith**. Smith holds a Ph.D. in Physical Chemistry from the U. of Rochester and has worked extensively in the area of carbon research.

*Note the correction to last month's issue; Doris Willmer to the PTAL Staff.

AE Lab

A paper by **Don Bodnar** and **Lee Edwards** titled "Near-Zone Radar Cross Section Measurements" has been accepted for presentation at the National Conference on Electromagnetic Scattering to be held at the University of Chicago June 15-18.

Advanced Technology has hired two new engineers, **William K. McCroskey** and **Charles T. Harris** to work in the growing microprocessor program. Bill received his MSEE from Ga. Tech and Chuck graduated from Tech with a BEE.

Frank H. Vogler and **H. M. Wadsworth** attended the Power Tubes Specialists Conference in Monterey, California March 16-18. Dr. Wadsworth presented a paper titled "Reliability of High Power Microwave Tubes" which was authored by Dr. H. M. Wadsworth, Frank H. Vogler, and Robert P. Zimmer.

A paper by **J. L. Eaves**, **Dr. R. N. Trebits**, **S. P. Brookshire**, **S. O. Piper**, and **J. A. Schell** (AFAL) titled "Flight Evaluation of Stationary Target Identification Techniques" has been accepted for presentation at the 22nd Annual Tri-Service Symposium to be held at the Air Force Academy in Colorado Springs, July 6-8.

Drs. Johnson J. Wang and **C. E. Ryan** visited Autonetics in California and NAVSEC in Washington, D.C. to discuss DG-AEGIS Ship Design. **Fred L. Cain** and **James C. Toler** visited the National Institutes of Health in Rockville, Maryland for potential sponsorship of biomedical studies. **J. Dayton Adams** and **Fred L. Cain** visited Rome Air Development Center in Rome, N.Y. for a program review on Phase II of their Broadband Antenna Measurements Programs.

Clif Burdette presented a paper at the Association for the Advancement of Medical Instrumentation Conference held in Atlanta in March. His paper was on "Thermistor Temperature Measurement in High Power Microwave Fields." He also presented a paper at the IEEE Region III Southeast Conference held at Clemson, S.C., titled "Dielectric Measurements of Cryogenically Preserved Blood and Tissue."

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