

Station News

Georgia Tech Engineering Experiment Station

VOLUME 9 NUMBER 2

FEBRUARY 1980

Stelson Named Atlanta Engineer of Year

*Put in
1981
Annual
Report*

Vice President for Research Thomas Stelson was recently chosen Engineer of the Year for Metropolitan Atlanta by the Georgia Society of Professional Engineers.

Stelson was recognized for his accomplishments at a banquet held on February 22 during Atlanta Engineers Week. He is currently serving as assistant secretary for conservation and solar applications of the U. S. Department of Energy.

They're Counting on You

April the 1st will be an important day for you and your neighbors. It is the day the twentieth census of population will begin for every household in the U. S.

Questionnaires will be mailed to about 86 million housing units for 222 million people in more than 3,200 counties and 2,500,000 city blocks.

The Constitutional purpose of the census has not changed since the first census in 1790: to provide the basis for fair apportionment among the States of seats in the House of Representatives. However, the census information forms the basis of many other decisions that affect our daily lives.

The 1980 census questions will include subjects like age, race, sex, marital status, type of housing unit, education, and occupation. While Federal laws require everyone to answer the census, the same laws assure that every person's answers to the census are kept confidential.

Mary Edna Anders of EES's Basic Data Division urges everyone to participate in the census. "The census is so important," she says. "It is a building block for health planning, school administration, business activities, transportation planning and other analyses based on demographic information."



Tom Brown, ERL, perched on a tower 72 feet above the ground, gazes into the eye of a light pipe being tested at the Georgia Tech/Department of Energy solar furnace located on campus. This month the pipe will be further tested at a 1000 kilowatt solar furnace located in Odeillo, France. Steve Bomar and John Handley, both of ERL, will brave peak season skiing crowds in the small Pyrénées town to conduct tests which may lead to more information about the effects of nuclear explosions. Soil samples will be placed inside the pipe and struck with high amounts of solar radiation, simulating the effect of the blast of an atom bomb on the earth's surface.

President's Gasohol Plan Needs Time, Says Economist

It is doubtful that the president's proposed gasohol program could be met in even two or three years, says an economist with the EES's Economic Development Laboratory.

Nick Gibson, an economist specializing in energy-related topics, says that the president's gasohol plan, based on the grain denied the Soviets, needs time. The biggest problem, says Gibson, is that the United States does not have adequate production facilities for converting large amounts of corn into ethanol, the alcohol component of gasohol.

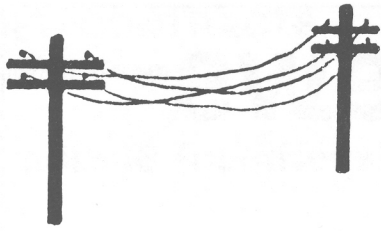
Approximately 14 million metric tons of grain will be diverted from shipment to the Soviets. Of this amount, the equivalent of five million metric tons, or 200 million bushels, of corn has been earmarked by the president for gasohol production.

The economist says that the United States' present capacity for producing ethanol is approximately fifty million gallons per year. This is primarily from two large industrial alcohol plants, one in Illinois and one in Pennsylvania.

The embargoed corn could produce as much as 500 million gallons of ethanol, says Gibson. This is ten times the amount of ethanol we can now produce.

Gibson does feel, however, that with proper government incentives such as tax reductions and subsidy plans, the rate of ethanol production could double or triple within a year or two.

If this happens, the economist says that the five billion gallons of gasohol that could be made from the 500 million gallons of ethanol could provide about five percent of the nation's annual gasoline requirements.



Station to Station



We're right in the middle of distributing employee performance evaluation forms to every supervisor. This is a familiar process for classified employees, although it's now done only once a year, instead of every 6 months, as before.

Most of the professional employees should have experienced some form of written evaluations by now.

This year, Ryan Mura is providing us with a standardized format for use in all professional evaluations. He will also be conducting a number of training sessions, together with question and answer periods, on proper preparation of objective evaluations.

These evaluations should really be just an annual formalization of the continuous interaction between employee and supervisor. It's the manager's responsibility to convey to those reporting to him what is expected of them, to give positive reinforcement of their successes, and to be prompt in discussing their shortcomings. The employee should not hesitate to ask for clarification of his duties. He should receive guidance when requested, and otherwise participate fully in the evaluation process. This includes the right to disagree.

While it is obviously important to know how one's past performance has been evaluated, it's even more vital to have plans for improvement, for new opportunities, and for growth. Once a year is surely not too often for a careful inventory of your job, your work environment and your future in EES. So, please participate fully and with a positive attitude, from whichever side of the table you happen to be sitting.

Donald J. Grace

Tech Experts Brief Legislators

Members of the Georgia General Assembly gathered recently at Tech to hear an overview of major Tech energy research projects.

Tech experts participating in the special briefing were Jack Spurlock, Acting Director of the Office of Interdisciplinary Programs; Don Grace, Director of EES; Associate Director Rudy Yobs; and Jerry Birchfield, Director of the Technology Applications Laboratory.

Others on the program included Vernon Crawford, Acting Chancellor of the University System of Georgia; Tommy Irvin, Georgia Commissioner of Agriculture; and Mark Zwecker, Director of the State Office of Energy Resources.

The meeting was hosted by the Joint Energy Committee of the House and Senate, and the Georgia Poultry Federation.

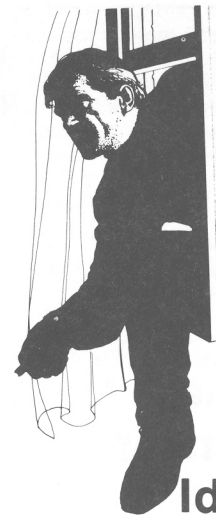
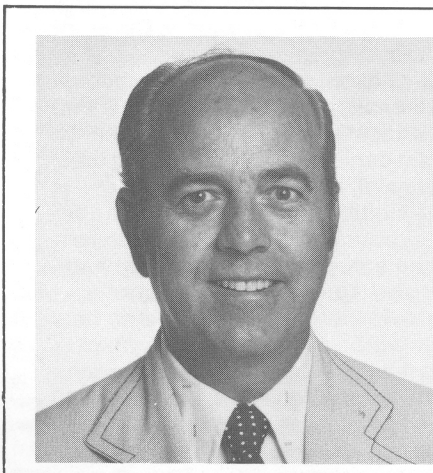
East Meets West

An article by Dr. Tz I. Chiang of the Economic Development Laboratory was published in the inaugural issue of the "Science and Technology Review," a new monthly magazine devoted to furthering scientific and technological exchange between scholars of the People's Republic of China and the Western world.

The Chinese-language magazine contains articles by scientists in the U. S., Western Europe and Hong Kong. The articles cover a variety of subjects relating to modernization.

More than 100,000 copies of the inaugural January issue have been distributed in China alone. The editors of the magazine welcome contributing papers, either in English or in Chinese, from American scholars.

A copy of the magazine is available at the reserve desk of the Price Gilbert Library. Anyone who has an interest in the magazine may call Chiang at 3827.



Operation Identification

The prime motive of burglars, particularly in office areas, is to steal property which can be quickly and easily resold. Present EES equipment can be identified by either the Georgia Tech inventory decal or the serial number which is recorded at the time of delivery. However, the decal can be easily removed leaving no trace of ownership.

By engraving an identifying number on a piece of equipment, another deterrent can be placed in the criminal's path. This marking can also be removed, but an indication that something was once there will be left.

See that your equipment is marked. Engravers and reporting forms are available through my office for people to use in getting their equipment properly marked. Records of marked equipment will be maintained both on campus and with the Atlanta Bureau of Police Services.

Personal property can be marked the same way. If you haven't taken the time to mark items of value in your home, I urge you to contact your local police department and participate in their Operation Identification program. If they don't have an active program, contact me at extension 3408 and make arrangements to check out an engraver for use at home.

Carl Baxter

Butler Joins Senior Staff

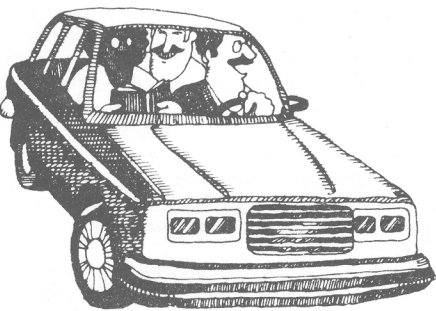
Paul Butler recently joined the EES Senior Staff as a Senior Research Engineer. Butler received a Bachelor's Degree in Electrical Engineering from Tech in 1952 and is registered as a professional engineer in Alabama.

Butler came to Tech from Pan American Airlines where he was manager of engineering and construction services.

He will primarily be involved in promoting programs within the resources laboratories.



A short class was held recently for Tech employees to learn proper ways to put out fires with fire extinguishers. Fire Marshall Allen Williams (C) and Carl Baxter (R) look on as Robert Killett attempts to put out a kerosene fire during the class.



Carpool

These folks sent in their names and addresses because they're interested in cutting the cost and the strain of driving long distances to work. Contact them at the numbers listed if you'd like to share a ride. To start your own car pool, send us your name, number, route, and any other information (smoking/non-smoking, type of car, etc.) and we'll print it in the next issue.

Dee Bryson, 894-3635 (o), 972-2084 (h). Snellville to Tech via 78 to Ponce de Leon, Trans-Am, non-smoking, 8-5, M-F.

Hank Jackson, 894-3412 (o), 943-3760 (h). Powder Springs to C&S Bldg., via Bankhead Highway (Rt. 278). Compact, non-smoking, 7:30-4:30, M-F.

Ann Mintz, 894-3494. Forest Park to Tech via I-75. 7:30-4:30, M-F.

New Contracts

CMSL F. A. Rideout, Evaluation of Water Borne Coatings for Marine Use, Avondale Shipyards, Inc., \$33,704.

CSTL J. M. Hanks, Foundations of Deterministic Scheduling of Programs for Paralleled Execution, The University of Wisconsin-Milwaukee, \$14,921.

J. T. Scoville, Design Review of Micro-processor Controller, General Electric, \$7,600.

E. W. Martin, Technical Advisory Support, MERADCOM, \$2,016.

G. L. Peckham, Multiple-Service Switching Systems, Megaplex Networks, Inc., \$54,991.

EDL N. S. Gibson, The Economic Impacts of Proposed Surface Impoundment Guidelines for the Pulp & Paper Industry, Union Carbide Corporation, \$39,819.

D. A. Chase, The Market Potential for Printed Circuit Boards, Epilepsy Assoc. of Georgia, Inc., \$8,507.

D. S. Clifton, Intergovernmental Personnel Loan, U. S. Dept. of Army, \$22,980.

W. C. Howard, On-Site Safety and Health Consultation Services to Georgia Business & Industry, U. S. Department of Labor, \$641,850.

J. Moskaluk, Development and Refinement of Analysis Tools for Transportation Planning, Atlanta Regional Commission, \$5,000.

R. R. Ratajczak, A Research Program to Analyze OMBE Data on Minority Business Failures & Discontinuances, U. S. Department of Commerce, \$41,772.

EEL C. Stone, The Dapit Secretariat: Purpose and Functions, U. S. Aid Mission to Ghana, \$2,642.

P. D. Loveless, A Program of Technical Assistance for Habersham Plantation, Inc., Habersham Plantation, Inc., \$2,200.

R. Junk, A Proposal for a Study to Determine the Impact of a Proposed New Kimberly-Clark Corp. Plant on CSRA Counties, CSRA, Planning & Development Commission, \$1,825.

J. D. Walton, Publication of the Final Report of the African Solar Energy Workshop Developed Under A-2353, Atlanta University, \$5,500.

R. C. Johnston, Nonconventional Energy Development Training, U. S. Agency for International Development, \$2,518.

EML F. L. Eisele, Reactions and Transport Properties of Atmospheric Ions, National Science Foundation, \$57,059.

J. M. Schuchardt, Specifications for Adaptive Millimeter Imaging System, Naval Research Laboratory, \$300,207.

ERL T. B. Elfe, Optical, Thermal and Stress Analysis of Ceramic Receiver, Fairchild Stratos Division, \$15,986.

S. M. Jeter, Monitoring the Shenandoah (Georgia) Community Recreation Center Solar Cooling, Heating & Hot Water System, \$8,595.

R. A. Cassanova, A Cooperative Program of Applied Energy Research and Technology Development, Atlanta University, \$137,895.

ETL B. J. Cown, Analysis of Directive Antenna Performance for CVV Contract Design, Atlantic Research Corp., \$5,000.

B. J. Cown, Measurement & Analysis of Directive Antenna Gain Loss Caused by Shipboard Multiple Obstacles, Naval Sea Systems Command, \$89,675.

R. W. Moss, Analog/Digital Mix for Future Tactical Communications, U. S. Army Signal Center, \$6,178.

H. W. Denny, RADC Post-Doctoral Program (C-E Systems), USAF, RFSC, Rome Air Development Center, \$52,778.

RAIL B. C. Appling, Guided Projectile Project, General Electric Company, \$5,000.

E. F. Greneker, Further Develop a Radar Analysis Management System, Department of Treasury, \$461,125.

G. K. Huddleston and H. L. Bassett, Parametric Investigation of Radome Analysis Methods, Air Force Office of Scientific Research, \$63,802.

L. C. Bomar, Proposal Effort for Design of a Real Time Velocimeter System, Datron Systems, Inc., \$15,000.

NEW CONTRACTS,

continued from p. 3

N. C. Currie, Waterborne Intruder Detection Segment (WIDS) Target Detection Unit (TDU) Advanced Development Model (ADM) Test Support and Data Analysis, Naval Coastal Systems Center, \$115,116.

W. Steinway, RF Environment, Test Data and Analysis, U. S. Army Missile R & D Command, \$30,000.

E. F. Knott, Chaff Theoretical/Analytical Characterization and Validation Program, U. S. Army Research Office, \$40,000.

* **Help for EES** *
* **Public Speakers** *
*
* Research at Georgia Tech is a
* many-faceted affair as groups and
* audiences will learn when they
* view "Research at Georgia Tech,"
* our new, one-projector slide/tape
* show. The show is boxed and
* ready to go, for general purpose
* viewing, through the Office of Re-
* search Public Relations, 226
* Hinman Building. Call ext. 3444 to
* reserve the show for your next
* meeting. Projectors are available
* on request.

E. F. Knott, RCSR Survey, Naval Electronic Systems Command, \$45,000.

N. C. Currie, Waterborne Intruder Detection Segment (WIDS) Target Detection Unit (TDU) Advanced Development Model (ADM) Development Support, Naval Coastal Systems Center, \$217,874.

J. C. Butterworth, Seiren Modulator, Brunswick Corporation, \$10,666.

R. H. Trebits, Marine Air Traffic Control and Landing System (MATCALs) Investigation, Naval Electronic Systems Command, \$398,852.

SEL H. F. Engler, Overall Functional System Test Procedure, Warner Robins ALC, \$51,000.

SEL R. P. Zimmer, Consulting Services for Technical Support on GET-1 Proposal, General Electric Company, \$5,000.

R. Beasley, F-15 Chaff & Flare Analysis, Warner Robins ALC, \$60,000.

STL C. L. Hilbers, Fire-Control Radar System, U. S. Army Missile Command, \$1,384,000.

TAL L. P. Fisher, Potential for Industrial Water Conservation in Georgia: Major Water Consumption Groups, U. S. Department of the Interior, \$73,141.

R. S. Combes and R. D. Atkins, Planning Project for a Poultry Industry Engineering Research Institute, National Science Foundation, \$72,755.

W. B. Himes, Apartment Owners and Managers Association Energy Conservation Program, Georgia Office of Energy Resources, \$15,108.

Presentations/Awards

EEL Mr. Clint Stone attended the International Workshop on Energy Survey Methodologies in Jekyll Island, Georgia, sponsored by the National Academy of Sciences.

TAL Jim Clark of the Applied Engineering Division presented his research findings in energy conservation for the paper industry to the staff of Huyck Research Center, Rensselaer, N.Y., Feb. 6. The research evaluated the application of a textile processing device, the Machnozzle, as an aid to de-watering the felt on the press-section of a paper machine.

Danny Reed of TAL's Energy Conservation Division spoke to Rotary Clubs in St. Simons January 8 and in West Augusta February 21 on energy conservation and research. Reed and engineers Ralph Lamade, Steve Coursey, Norris Garmon and Gary Richardson are conducting workshops for the Tennessee Valley Authority in Chattanooga to train energy auditors.

TAL engineers Craig Wyvill and Dale Atkins and Energy Research Laboratory director Robert A. Cassanova have written a book entitled, "A Handbook for Noise Control in Poultry Processing Plants."

Bill Bulpitt, head of the Wood Energy Systems Branch, was a sessions moderator at the Forest Products Research Society conference on Energy Conservation and Cogeneration from Wood in Atlanta February 18-20. His topic was "Case Studies of Wood Fuel Use Outside the Forest Products Industries."

Jerry Birchfield, director of TAL, was also a sessions moderator at the same conference. His topic was "Air Pollution Control Equipment for Wood Energy Systems."

Personnel Announcements

CSTL Dr. Kenneth R. Perry recently joined CSTL as head of the Digital Signal Processing Branch. Perry received his Ph.D. from Stanford University last year and has moved to Atlanta from San Jose, California.

David Winters, Computer Programmer III, Joe Celko, Research Scientist I, Dianne Humphrey, Research Scientist, and Judi Gilbert, Secretary, have joined the Software Applications Division.

In the Robotics Branch, Fred L. Cox has been hired as a Research Scientist I.

Allen T. Acree, Research Scientist II, and Deborah Thomas, Administrative Secretary, were recently hired by the Software Research Division.

Ed Shanahan, Lt. Colonel, Retired, has joined the Command and Control Support Branch as a Senior Research Scientist. Billy Wise came to the Branch as a Senior Research Scientist from Johns Hopkins University. Louise Ruffin joined CCSB as a Clerk.

EDL Peter DeGenering has recently joined EDL as a Research Scientist and will be working under Jerry Jackson in energy research. DeGenering just moved to Atlanta from Boston where he was a research associate at Charles River Associates for the

past 14 months. He received a B.A. in economics from Boston College in 1978.

Charles Estes, REII, is a new member of the TAAC Division. For the past 8½ years Charles worked for Monsanto Corporation and was Supervisor of Industrial Engineering. He graduated from Auburn with a BSIE and received his MBA from the University of South Carolina.

EEL Mr. Larry Youngner of the Augusta Area Office has resigned to accept a position with Concrete Products, Inc., in Brunswick, Georgia.

EML Rob W. Bird of the Radiation Systems Division and Terrell E. Balof-Bird have a new baby, James Andrew Balof-Bird, born October 30, 1979.

John Tyler Hagler is the new grandson of Billy Livesay of the Solid State Sciences Division. He was born in Bloomington, Indiana, on Feb. 3, 1980.

Our sincerest condolences to Mike Sinclair, Electro-optics Division, on the recent death of his mother.

ETL Pam Frye has joined the Communications Systems Branch as a Senior Secretary.

Thomas M. Mowery and Charmaine Frandsen have been hired as Research Engineers I.

The Biomedical Research Group has hired Paul Friederich as a Research Scientist I.

Bernard M. Jenkins has transferred from the EMC Branch in ETL to the Biomedical Research Group.

STL James W. Brown, Jr., has joined STL as a Senior Research Engineer. Robert R. Rathburn and D. K. Howe have been hired as Senior Research Associates.

Robin B. Parks has joined the lab as a Technical Typist.

David H. Gifford and Alexander M. Morrison have been hired as Research Technicians I and Douglas M. Devine is employed as a Research Technologist I.

I. Leon Stillman has transferred into the laboratory.

Keith R. Harris and his wife Teresa have a new baby girl, Jennifer Elizabeth, born December 19, 1979. Jennifer weighed in at 6 lbs. 15 oz.

Bruce A. Lafitte and wife, Daria Jones, also have a new baby born during the Christmas holidays. Their son's name is Ryan Jones.

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