

STATION NEWS

ENGINEERING EXPERIMENT STATION • GEORGIA TECH



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MERRY CHRISTMAS



suggesting employees consider car pools to save gas as well as wear and tear on cars. The emission control devices on your car reduce engine efficiency by about 7% but provide a vital social function. They use gasoline, but don't waste it. After all, one-half of every barrel of domestic crude oil goes for gasoline to power cars and trucks. And different features on cars use more gas. For example, an automatic transmission has a 6% fuel penalty and air conditioning, 9% to 20%, depending upon conditions. Weight carries the largest penalty, up to 100%. A 5000 pound car, for instance, burns twice as much gasoline as a 2500 pound one.

Also, discuss with your family the alternatives to excessive driving, such as combining trips to eliminate unnecessary ones, bicycling, walking or using MARTA. There are several copies of the MARTA bus system route map in the Baker Building lobby. By calling 522-4711, a MARTA representative can tell you what buses travel which routes. During the holidays, everyone should seriously consider "at home" vacations or limit automobile travel to Georgia — at a lower speed.

At home and at work, everyone should look for wasteful practices, such as leaving lights, equipment and appliances on when not in use. Or unnecessarily using excessive amounts of energy. The effort to conserve the short supply of energy should be a 24-hour concern.

If our readers have suggestions or have found innovative ways to conserve energy, we would like to hear from you and pass on the information. Above all, remember to save the energy we do have.

Energy Conservation Program

In a recent memo, Tech President Pettit outlined the University System energy conservation plan which is part of a state-wide program initiated by Governor Carter. Tech's coordinator is Safety Director **Dr. Richard Fuller** who will welcome your suggestions. With only six percent of the total population, America accounts for more than

one-third of the world energy consumption. Annually, this is 2.8 billion tons of coal or 616 billion gallons of oil or 70 trillion cubic feet of natural gas. On the local level, EES fuel bills average between \$5000 and \$6000 each month. Electricity is the largest, running about \$4500 a month.

The University System has taken several steps concerning the shortage,

Car Pool & Insurance

Car owners should be sure their car insurance isn't jeopardized by a share-a-ride plan used during the energy crisis.

Generally, insurance on privately owned cars excludes money-making operations. If the car pool operates for profit, passengers may not be protected under the vehicle owner's insurance policy.

This problem could come up when one of the car pool members doesn't share driving, but pays a regular fee instead.

Car owners are advised that if the charge to the non-driving member is more than a fair share of operating costs, the car owner should report the change from private to commercial vehicle to his insurance company and be prepared to pay a higher rate for insurance.

Slow down for the US

International Development Activities in Full Swing

IDD girdled the globe in November and December under the Georgia Tech grant from the Agency for International Development. **Nelson Wall** went to South America, **Earl Logan** to Africa, and **Ross Hammond** to the Far East. Wall's activities included attending a small-scale industry meeting in Bogota, Columbia, and visits to Ecuador and Guayana.

Logan first worked with a counterpart institution in Nigeria, the University of Ife. Then he went to Kenya to talk about a counterpart agreement with Kenya Industrial Estates, a government agency which establishes industrial parks and administers a rural development program. He was to wind up his tour at Soong Jun University in Seoul, Korea, another counterpart.

Hammond went to the Philippines to discuss counterpart possibilities with Mindanao State University and the Institute of Small-Scale Industry associated with the University of the Philippines. He was to join Logan in Korea before returning home December 15.

EES PEOPLE ON THE MOVE



R. J. Johnson, NBSD, attended a conference on Power Plant Controls in Knoxville, TN. Oct. 8-10. . . **T. W. Kethley**, NBSD, delivered a paper to the national meeting of the American Public Health Association in San Francisco Oct. 22. . . **M. V. Davis**, NRC, chaired a session of the ANS Standards Group meeting in San Francisco Nov. 9-18. . . **D. M. Walker** and **R. C. McFarland**, NBSD, also attended the ANS meeting and the IEEE meeting in San Francisco, Nov. 11-16. . . **J. N. Harris**, HTMD, attended the Second Army Materials Technology Conference in Boston Nov. 13-16. . . **N. C. Wall**, IDD, visited Ecuador, Columbia and British Guayana from Nov. 15-Dec. 8. . . **C. E. Logan**, IDD, went to Nigeria, Kenya and Korea Nov. 17-Dec. 18. . . **R. K. Hart**, PSD, attended a frequency control program at Ft. Monmouth, N.J. Nov. 20. . . **R. W. Hammond**, IDD, visited Manila and Marawi City, Philippines and Seoul and Taejon, Korea Nov. 23-Dec. 15.

EPA Visitors

Dr. G. Leddicotte, NBSD, hosted members of the Atlanta Regional Office of the Environmental Protection Agency on November 19. **Dr. R. Stringer** and **Dr. Carl Sova** were investigating a detector devised by ASD for determining pesticides.

IDD Holds Three More International Development Seminars

The fourth seminar in IDD's International Development Seminar Series was held October 2. The programs of the Technology and Development Institute (TDI), East-West Center, Honolulu, Hawaii, were explained by **Manuel S. Alba**, Director of the Institute. On November 8, **Louis J. Goodman**, Assistant Director for Education and Professional Development at TDI, gave the fifth seminar, speaking on the role of the non-metropolitan university in community development. Seminar No. 6 was held November 9, with **Ted J. Davis** of the International Bank for Reconstruction and Development (World Bank) briefing the staff on the bank's rural development program.

December Pay

December pay checks will be available on the last working day prior to the Christmas holidays (December 21). Time sheets for budgeted personnel are due December 19. Personnel working on an hourly basis who wish to receive their pay check on December 21 must submit time sheets no later than noon, December 7 for the period November 15 through December 6. The January pay period would then cover time worked from December 7 through January 14.

Energy economy is everybody's business

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Project for S & T

Notice has been received from Senators Nunn and Talmadge that the Environmental Protection Agency is awarding a \$30,000 grant to Georgia Tech as a result of a proposal submitted by **Albert McSweeney** of the Special Techniques Division. The grant is for "Laser Optical Studies of Aerosol Dynamics", and Albert McSweeney will direct the project.

The funds are to be used for a "proof of principle" investigation of a technique for measuring the size distribution of aerosol particles. The technique is based on a matrix inversion of Fraunhofer diffraction pattern data to yield the size distribution of large numbers of particles essentially in real-time.

The approach to be taken will utilize an argon ion laser as a source of radiation in a coherent optical processing system. The system will consist of a pinhole spatial filter followed by a collimating lens, a large sample volume, a Fourier transform lens, and an annular ring detector array.

A set of pinholes of various diameters will be used to generate data for preliminary testing of the optical system and matrix inversion technique. A second set of samples will be made of black circular spots on photographic transparencies. These will allow adequate flexibility and reproducibility to test and refine the technique under conditions that more closely approach those of an aerosol sample.

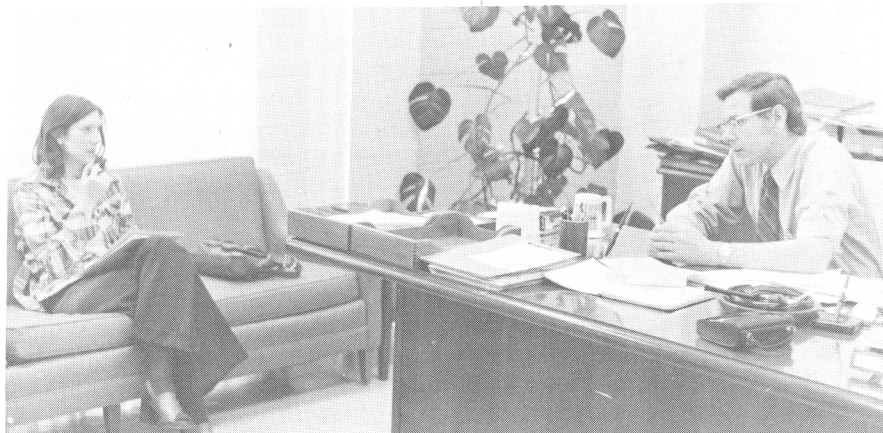
The system will then be used to demonstrate its ability to measure the size distribution of particles in air.

68° is better for you and your country

Kaycee Logan was transferred from HTMD to Analytical Instrumentation Labs, PSD.

Despite our protests and dismay,
The metric system's on the way.
Sneaking in are grams and liters,
Milligrams and centimeters,
And pretty soon it is a cinch
That we'll be forced to give an inch.

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Miss Diane Thomas, editorial associate of *Atlanta Magazine* interviews Dr. Maurice Long for a feature story of EES to appear in the January issue.

Dr. Husted On Energy

Shortly after the President's message on energy conservation, **Dr. John Husted**, TAG, was interviewed by the *Atlanta Journal*. In the November 8 story, Dr. Husted is quoted as saying that federal funding for research on developing energy sources is overdue. He said he is encouraged by the indication that more federal funds will be used trying to solve these. What concerns Dr. Husted, however, is the lag time between the realization that we have an emergency and getting things moving.

Regional Director Visits

The Regional Director, **Charles McMillen**, of the Office of Minority Business Enterprises (OMBE) visited IDD's industrial assistance office November 13 to see how it can help him develop minority businesses in the Southeast. Ed Bethea hosted McMillen, Dorothy Kinerson and Larry Bergeron. The OMBE is part of the Commerce Department and recently established a regional office in Atlanta.

Talk Show

Chart Bonham appeared as a panelist discussing the energy crisis, November 10, on TV Channel 17, at the request of the Governor's Science Advisor, **Dr. Ted Mock**.

ACCIDENT REPORTING PROCEDURES

The Department of Campus Safety recently issued guidelines for reporting on-campus accidents/injuries. Mishaps should be reported immediately to the Georgia Tech Police (894-2500). The following reports are also essential:

1. Employer's First Report of Injury — This is important for the benefit of the injured employee and must be completed as soon as practicable after the injury has occurred. A list of the names, addresses and phone numbers of all witnesses should be at the bottom. The report should be forwarded directly to the Personnel Office in the Knowles Building.

2. Supervisor's Accident Investigation Report — This must be completed for each accident resulting in an injury and/or property damage of \$100 or more and should be forwarded directly to the Department of Campus Safety as well as to the Personnel Office.

3. Employer's Supplemental Report of Injury — This must be completed when the injured employee returns to work and is forwarded to the Personnel Office.

Adherence to these procedures will insure appropriate actions are taken to aid the injured employee and provide the necessary documentation for processing a Workmen's Compensation claim if necessary. All work-associated injuries must be reported whether the employee requires or refuses medical attention.

PROFILE



Billy H. Atcheson, Supervisor,
Accounting and Budgets, EES

He Figures

This time of year, perhaps one of the favorite places in EES is the accounting office which distributes our paychecks. **Billy Atcheson**, head of the accounting and budget office and his six staff members have the task of keeping pay records straight. The office also maintains financial records on all EES research activities. He and his staff coordinate all the financial matters between EES and Georgia Tech by working closely with personnel of the Georgia Tech Research Institute and the Office of Financial Affairs.

To keep the paper work flowing smoothly, the accounting office lends assistance to researchers preparing various financial reports required by sponsors and provides project directors with monthly appropriations sheets. In addition to preparing the overall Station financial report, travel expense reports, petty cash reimbursements and sponsor's invoices are handled by the accounting office.

The primary function of the budget office, according to Bill, is the preparation of the Station's annual budget. The office also maintains the budget on a current basis during the year through monthly budget amendments. The Director is furnished various financial reports on Station activities.

Billy came to EES ten years ago with quite a store of experience. He was with Swift and Company for several years and spent two years in the Marine Corps. He is an avid weekend golfer, as evidenced by quite a collection of trophies gracing his office. He is involved with the golfing activities at the Berkeley Hill Golf Club in Norcross as a member of the Board of Governors and Secretary of the Men's Golf Association. Bill is one of those rare creatures called a Georgia native; he is originally from Roswell and now lives in Doraville. His wife Dorothy is assistant vice president of operations at the Buckhead office of Fulton Federal Savings and Loan.

The Nuclear Reactor Center is busy making an upgrade change of 1 megawatt (Mw) to 5 Mw, which will make the Center one of the largest university reactors in the country. The upgrade is due for completion in December.

Drs. James Knight and John Tatom of the Waste Utilization Lab made several visits to several government agencies in Washington, D.C., Cincinnati, Ohio, and Durham, N. C., in connection with an EES process for developing "clean" fuels from waste materials. Considerable interest was stimulated and several government representatives have visited EES to observe and discuss the process as a result.

NEW ARRIVALS

Kay Rogers, formerly of IDD, gave birth to a baby boy, **John Colquitt**, on November 27.

Martha Ann Deadmore, IDD, welcomed a grandson, **Timothy James Sipp**, November 26. Timothy's brother, **Jeremiah**, is 19 months old. She will visit the Sipp family in Stow, Ohio, at Christmas.

Our Best Wishes, Alton

Alton Colcord suffered a heart attack Sunday, November 11; he is recovering nicely and expects to return home from the West Paces Hospital in early December and be back to work in January.

S & T News

Several members of the Systems and Techniques Department staff were active participants in the National Telecommunications Conference held in Atlanta on November 26-28. **Mr. S. L. Robinette** and **Mrs. J. C. Toler** of the Communications Division served on the Conference Executive Committee as Publicity Chairman and Local Arrangements Chairman, respectively. **Mrs. Susan Harden** of the Special Techniques Division also served on the Local Arrangements Committee. **Mr. R. W. Moss**, Communications Division, was Hospitality Chairman and **Mr. J. R. Walsh**, Communications Division, was Chairman of the Audio-Visuals Committee. The Conference was attended by approximately 800 delegates who work in areas concerned with Communications Technology.



The Director of EES, **Dr. M. W. Long**, extends his best wishes for a happy, healthy and prosperous New Year and appreciation for the successful work done in 1973 to the entire Staff of the EES.

The EES Christmas Holiday period will be Saturday, December 22 to Monday, December 31, 1973. January 1, 1974 will also be a holiday.

All employees and staff of EES are invited to the EES Christmas Party in the **Harry L. Baker Building auditorium, 3- to 6 PM, Friday, December 21.**



Gordon Harrison, ASD, recently bowled a 266 frame and a 634 game — a real high roller!

**50 is not an age —
it's a speed limit**