

Station News

Georgia Tech Engineering Experiment Station

VOLUME 11 NUMBER 3

OCTOBER 1980

EES Advisors Chart Station's Future Course

Obtaining additional equipment and personnel for research should be among EES' highest priorities for growth during the next decade, according to the Station's External Advisory Board.

The select group of advisors reached this and other broad conclusions during a two-day briefing by EES officials at Georgia Tech on September 23-24. The External Advisory Board annually reviews the past and present status of EES, and recom-

mends methods by which the Station may achieve its development goals.

The verdict of the advisors was generally favorable. As one advisor said, "The entire Station should be complimented on the amount of effort that has gone into making EES a dynamic organization which produces quality research."

Maintaining the present growth rate, the advisors concurred, will be more difficult during the early 1980s. They made the following recommendations to help the Station achieve its goal of doubling its size within the next five years:

- Find more innovative ways to acquire more research equipment and space for additional personnel.
- Exercise increasing selectivity in allocating financial resources to achieve maximum program growth.
- Double EES' current average of new contract proposals.
- Write proposals that meet the specific needs of one agency, rather than using a "shotgun" marketing approach.
- Achieve closer and more mutually beneficial working relationships with Tech's academic research units.
- Recruit only the highest quality of professional staff and graduate students.

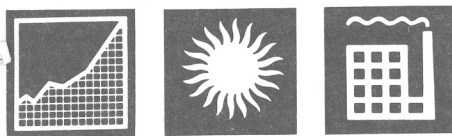
In summary, the advisors counseled that the primary goal must be to maintain the Station's reputation for quality research. The research quality, expertise and technology which have allowed the Station to grow at a remarkable rate are the foundations that will allow it to double its size within the next five years.

The External Advisory Board consists of members of prestigious cor-

porations and universities. Attending this year's meeting were: **George Dieter**, dean of engineering, Univ. of Maryland; **Gene Durren**, director of corporate engineering, Whirlpool Corp.; **Charles Johnson**, manager, Advanced Studies and Analysis Division, IBM; **Thomas Jones**, vice president for research, MIT; **William Leithauser**, general manager, Range Manufacturing Dept., General Electric Co.; **John McKelvey**, president, Midwest Research Institute; and **William Rambo**, senior staff, Stanford Research Institute.

In preparation for their visit, members of EES' Office of the Director and all laboratory directors met on September 16 with **Dr. Al Shepard**, acting vice president for research, during a full day's retreat at the Colony Square Hotel. EES leaders

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Resources Labs Are Reorganized

A new organizational structure which combines five labs into three has been created for the Station's Resources Laboratories. "The new organization is expected to result in a better alignment of staff capabilities and laboratories which are comparable in size and management structure," says **Rudy Yobs**, EES associate director, Resources Laboratories.

The Chemical and Material Sciences Lab (CMSL) and the Energy Research Lab (ERL) have been merged into one new unit which is now called the Energy and Materials Sciences Lab. EMSL is headed by **Hans Spauschus**, lab director, and **Bob Cassanova**, associate lab director. The lab will have three units: the Environmental Sciences Group, headed by

(Continued On Page 2)



EES Hosts Pre-Game Luncheon

All faculty and staff members who will be cheering the Yellow Jackets to a Homecoming victory over Tulane University are invited to attend a pre-game luncheon hosted by EES.

The 11:30 AM to 1:25 PM luncheon will be held in the Faculty Lounge in the Price Gilbert Library. Cheese, crackers and cookies will be provided for all guests. Other luncheon items, including sandwiches and soup, can be purchased through the Faculty Lounge.

Labs Gain New Research Contracts

COMPUTER SCIENCE & TECHNOLOGY LAB

B. Wise, USAEPG Test Driver Development, USACC, \$9,381. **S. B. Warner**, Energy Monitoring & Control Systems Training Aids Simulator, U.S. Army Engineer Division, \$9,350.

ECONOMIC DEVELOPMENT LAB

J. Jackson, Market Penetration of Coal Utilization Technologies, Union Carbide Corporation, \$60,000. **M. J. Moskaluk**, Collection of 1980 Base Travel Data & Development and Refinement of Analysis Tools, Atlanta Regional Commission, \$67,500. **C. A. Stone**, Training in Energy Management (I) — Evaluation of Project, U.S. AID, \$7,056. **B. E. James**, Training and Technical Services, Korea Credit Guarantee Fund, \$88,756.

ELECTROMAGNETICS LAB

H. M. Harris, Advanced Exploitation of Foreign Integrated Circuits, USAF Aeronautical Systems Div., \$99,949. **D. W. Covington**, Molecular Beam Epitaxy of $Hg_{1-x}Cd_xTe$, U.S. Army Research Office, \$232,761.

ELECTRONICS TECHNOLOGY LAB

V. K. Tripp, Assessment of Damage Effects on Radar Antenna Performance, Naval Surface Weapons Center, \$99,655. **H. W. Denny**, Supplemental Grounding of Extended EMP Collectors, Defense Nuclear Agency, \$199,524.

ENERGY & MATERIAL SCIENCES LAB

J. L. Brown, Analytical Studies of Electronic Components, Northern Telecom, Inc., \$5,000. **J. L. Hubbard**, Electrochemical Conditions Within Stress Corrosion Cracks, U.S. Army Research Office, \$10,000. **S. H. Bomar, Jr.**, Test Program for Raytheon Company at the CNRS Solar Furnace, Raytheon Company, \$41,278. **J. A. Knight**, Thermochemical Conversion of Biomass to Syngas, U.S. DOE, \$1,499,930.

RADAR & INSTRUMENTATION LAB

J. D. Echard, Non-Cooperative Identification-Friend or Foe, USAERADCOM, \$200,000. **R. N. Trebits**, Multi-Frequency Radar Sea Backscatter Data Reduction, Naval Surface Weapons Center, \$100,000.

SYSTEMS ENGINEERING LAB

R. E. Creswell, VAX Installation for ECSAS, Warner Robins ALC, \$74,500. **L. D. Holland**, Unintentional Radiation Exploitation (URE) Techniques, USAERADCOM, \$95,000.

SYSTEMS & TECHNIQUES LAB

B. O. Pyron, Analysis of Electronics Associated with Defensive Missile Systems, U.S. Air Force, \$80,000.

TECHNOLOGY APPLICATIONS LAB

R. S. Combes, Georgia Poultry Industry Research, Georgia Department of Agriculture, \$240,000. **D. M. Moore**, Energy Analysis & Diagnostic Center, University City Science Center, \$79,754.

Resources Reorganization, Continued

John Carden; the Energy Sciences Division; and the Material Sciences Division. Chiefs for the last two divisions will be announced later.

The Engineering Extension Laboratory (EEL) has been deactivated and all divisions have been reassigned to different laboratories. The Industrial Extension Division (IED), which includes Tech's Area Offices, has been transferred to the Economic Development Laboratory where it will function as a new division. **David Clifton** will serve as acting chief of IED until that position is filled on a permanent basis. **Rick Thomas**, who has been handling the new Manufacturing Technology Center under IED, has moved into the Technology Ap-

plications Laboratory (TAL) and will continue the MTC work there. The International Programs Division of EEL also has been transferred to TAL. **Nelson Wall** will continue as division chief of international programs. EES' Asia Area Office, headed by **Ross Hammond**, now reports directly to the Office of the Director through Rudy Yobs.

These organizational changes took effect on October 1. "We are pleased with this new structure," says Yobs, who reports that the moves will create an environment conducive to close interactions on related resources projects. At the present time, there are no plans to relocate personnel or research facilities.

Staff Activities R

COMPUTER SCIENCE & TECHNOLOGY LAB

Ed Shanahan presented two papers on "Soviet Military Theory" and "Soviet Ground Forces" at the Modeling and Simulation of Land Combat course held on campus in August.

Kenneth Perry, Digital Signal Processing Branch, spoke to the Atlanta Chapter of Black Professional Engineers in August on "Technology of the Future."

Several articles have been published in professional magazines by CSTL members. They are: "Accreditation: A New Embedded-Computer Standardization Approach," by **Bennett Teates** and **Billy Wise** in "Computer Magazine" (September); "Program Tests: Basic 'Rhino Algorithm'", by **Joe Celko**, in "Software Design" (September); and "MCF Part VIII: Planning For Post 1984," by **Edith Martin** in "Military Electronics/Countermeasures" magazine (July). Martin also was a panelist in the September 30 "Women in Science" workshop held at Georgia Tech.

ECONOMIC DEVELOPMENT LAB

William Spain authored an article on "Disorders of Heat Stress" in the August issue of "Freewheelin'."

ELECTROMAGNETICS LAB

Gene Loefer and **David Schmieder** presented a paper on "Targets, Backgrounds and Discrimination" at the IRIS Conference Specialty Group meeting at the Institute of Defense in Washington, D.C. on August 26-27.

Donald Blue, **Philip Reinhart** and **James Gallagher** coauthored an article published in the June "International Journal of Infrared and Millimeter Waves." The article was on "Millimeter/Submillimeter Nonlinear Spectroscopy."

ELECTRONICS TECHNOLOGY LAB

Fred Cain, **Jim Toler**, **Clifton Burdette**, **Ron Seaman** and **Joe Schaefer** attended the annual meeting of the Bioelectromagnetics Society in San Antonio, Texas on September 15-18. Cain also attended the ANSI C95.4 and COMAR committee meetings while in San Antonio. Burdette also has received a certificate of appreciation from the Atlanta Chapter of the American Business Clubs for a program he presented in July.

ENERGY & MATERIAL SCIENCES LAB

James Hubbard has been appointed

se In September

local arrangements chairman for the 1981 annual meeting of the Electron Microscopy Society of America. He met with EMSA's executive board in Reno, Nevada last month to discuss plans for the 1981 conference which will be held in Atlanta.

"Surface Powders on Surgical Gloves," a paper coauthored by **John Brown** and T. W. Tolbert of the Parke Davis Corp., was published in the June issue of "Archives of Surgery."

Tom Elfe and **Joe Harris**, Solar Research Branch, coordinated an ACTF User's Workshop at the Riviera Hyatt House in Atlanta on September 16-17. **Tom Brown** and **Martha Clayton** helped to organize the event in which talks were given by several corporate users of the ACTF, **Bob Cassanova**, associate lab director, and **Hamp Teague**, solar researcher.

RADAR & INSTRUMENTATION LAB

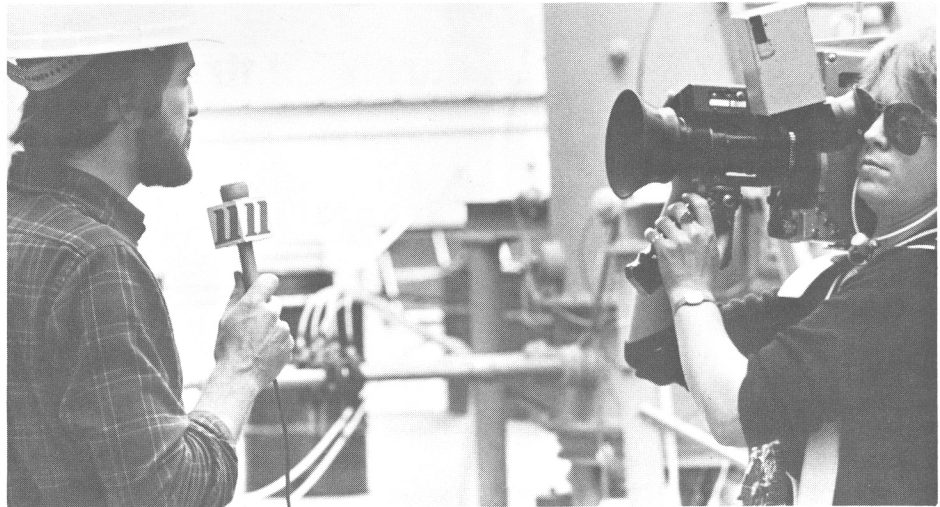
Part I of an article by Lab Director **Ed Reedy** was published in the August issue of "Military Electronics/Countermeasures" magazine. The article was on "Military Radar: Fundamentals and Applications."

Clark Butterworth and **David Ladd** (RAIL) and **George Ewell** (STL) coauthored an article in the August issue of "Microwave Journal." It was entitled, "High Power Millimeter-Wave Radar Transmitters."

SYSTEMS ENGINEERING LAB

Joanne Green attended the convention of the American Psychological Association in September in Montreal, Canada. She chaired a symposium on "Measurement and Training of Continuous Control Behavior" and presented a paper on "Measurement of Control Strategy by Computer Simulation."

SEL staffers **Thomas Miller** and **George McDougall** published an article on "An Integrated EW Testing and Evaluation Concept" in the July/August issue of the "Journal of Electronic Defense."



Two McGowan (left), the designer of EES' Gasifier, was interviewed by WAGA-TV and WXIA-TV on October 2 during a test run of the equipment at Area II. Bill Bulpitt, head of TAL's Wood Energy Systems Branch, also was interviewed by Terry Anzur of WSB-TV. The 10-foot tall gasifier converts densified wood pellets into a gas that can be used in producing heat, power and chemicals.

MTC Holds First Workshop

EES' new Manufacturing Technology Center (MTC) officially opened its doors on September 26 with the first of four workshops to be conducted this year for Georgia manufacturers.

Located in O'Keefe, the MTC has been created to increase manufacturing productivity in Georgia. The center will identify new industrial technologies and accelerate their use in the state.

As **Rick Thomas** of the MTC explains, "Many manufacturers in Georgia have devised new technologies which could improve productivity. Testing and producing these technologies, however, often involves financial risks. The Manufacturing Technology Center hopes to lessen the gambles taken by pioneering companies."

The MTC will assist manufacturers by encouraging them to undertake pilot projects and by fostering the use of successful technologies among other manufacturers in the state. Once a promising new technology has been identified, EES engineers will provide engineering and analysis expertise. The host company will be responsible for additional engineering, installations and operations. A government agency or private company will then be brought into the pilot project to fi-

nance demonstrations of the innovative product.

The findings of these pilot projects will be disseminated to a wider audience of manufacturers through workshops, lectures and exhibits.

The first workshop at the MTC was attended by manufacturers from a variety of Georgia industries. Led by **Rick Thomas**, **Tom Samford** and **John Scoville**, the workshop focused on programmable industrial control devices. Future workshops will concentrate on four major areas: industrial controls; industrial robots; improved manufacturing control systems; and instrumentation for detecting and predicting machine failures.

Advisors Meeting, Cont.

briefed the external advisors in meetings at the Baker Building, then the board met privately with Tech President **Joseph Pettit**, EES Director **Don Grace**, and **Al Sheppard**. The advisors subsequently briefed the EES senior staff along with other Tech leaders, including **Al Sheppard**, **Warren Heeman**, vice president for institute relations and development, and **James Stevenson**, acting vice president for academic affairs. **Robert Ferst**, vice chairman of the board, Georgia Tech Research Institute, attended as an observe.



**GIVE THE
UNITED
WAY**

Personnel News

COMPUTER SCIENCE & TECHNOLOGY LAB

Juan Santamaria, a former co-op with the Computer Applications Branch, has been promoted to research engineer I. CSTL also has bid a fond farewell to **Gary L. Peckham**, and **Jeanne Balsam**. Peckham, former chief of the Software Technology Division, is now working with Cox Cable Communications in Atlanta. Balsam has moved to Boston where she is employed by the Polaroid Corporation.

ECONOMIC DEVELOPMENT LAB

Joan Meeks has been promoted to administrative assistant to Lab Director **David Clifton**. Three members of EDL's staff have resigned to pursue other careers: **Red Provost**, technical writer; **Peter DeGenring**, research scientist I; and **Peggy Bronn**, public information assistant.

ELECTROMAGNETICS LAB

The Radiation Systems Division welcomes **Mark Frost**, research engineer I, to its staff in Huntsville, Alabama.

ELECTRONICS TECHNOLOGY LAB

Nona Butler, senior secretary, **John Mantovani**, research engineer I and **John Rohrbaugh**, research engineer I, have joined ETL's Electromagnetic Compatibility Branch. The Biomedical Research Branch also welcomes **Joe Schaefer**, research engineer II, and **Allan Moser**, research scientist II.

RADAR & INSTRUMENTATION LAB

The Modeling and Analysis Division welcomes three new employees: **Sandra Cuttino**, senior secretary; **Steve Hunt**, research engineer I; and **Joe Grimland**, research scientist II. Cuttino replaces **Nancy Brown** as **Mike Tuley's** secretary. Hunt has recently moved from Florida where he worked with Environmental Science and Engineering, Inc. Grimland formerly was employed by Lockheed-Georgia. **George Conrad**, research technologist II, left the Navy after 7 years to join RAIL's Radar Experimental Division. **John Balsam**, a former RAIL employee, has moved to Boston to attend Harvard University.



Jim Muller (center) spikes a volleyball over the net at EDL's Fall Picnic. EDL's staff gathered on September 12 to picnic on the grounds and play sports at the baseball field on Hemphill. The afternoon included a "Mr. Best Legs Contest."

SYSTEMS ENGINEERING LAB

The staff of the Electronics Support Measures Division has grown by three with the employment of: **Gary Sanders**, research engineer I; **Robert Willoughby**, senior research engineer; and **Jack Fulford**, research scientist I. SEL also welcomes **Philip Bloom**, senior research associate, to its office in Warner Robins.

Lee Davenport and **Jim Frawley** of the Special Projects Division have a lot to smile about. In September, Davenport gave birth to a new son and Frawley was married to **Loretta Wilson**.

SEL employees, families and guests enjoyed the lab's annual picnic on Saturday, August 23 at Lake Allatoona. The afternoon was filled with football and softball games, boating and picnicing.

SYSTEMS & TECHNIQUES LAB

STL employees celebrated two weddings and the birth of a new baby last month. **Rhonda Yearwood**, secretary, Systems Development Division, married **Warren Okerberg** of Design Services on September 6. **Ava Brush**, lab technician, Defense Electronics Division, became **Ava Brush Farmer** on September 12. **Rob Muzio**, Defense Electronics Division, is now the proud father of a baby daughter, **Katie Ann Muzio**.

Office Women's Party Set For December 4

Georgia Tech's annual Christmas Party for Office Women will be hosted this year for the first time by EES, according to **Dee Ramunno**, chairwoman of the event.

The party will be held on December 4 at 11:30 AM in the Student Center Ballroom. The affair will include a delicious lunch, door prizes distributed by Santa Claus, and entertainment by **Greg Colson** and the Georgia Tech Chorale.

The luncheon, which costs \$5.85 per person, is open to all Georgia Tech office women. A 14-karat gold bracelet and a weekend trip for two are among many donated prizes to be awarded through a drawing.

Office women who do not receive an invitation by November 10 should call **Ann Mintz** at 894-3494.

Mura Resigns Position

Ryan Mura, EES director of Human Resources, has resigned to accept a new position with the Department of Energy as of October 13. Mura is now executive director of DOE's Strategic Petroleum Reserve Office in New Orleans, Louisiana.

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