the GTRI connector

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Advanced Automation Lab Opens in CRB

by Martha Ann Stegar, RCO

GTRI unveiled its new Advanced Automation Research Laboratory at an open house April 10. The state-of-the-art facility is equipped with two robots, three machine vision systems, and a variety of industrial and computer support tools. It will be used for a range of initiatives in manufacturing technology and will be a resource for all of GTRI. The new laboratory is set up in the high bay area on the ground floor of the Centennial Research Building.

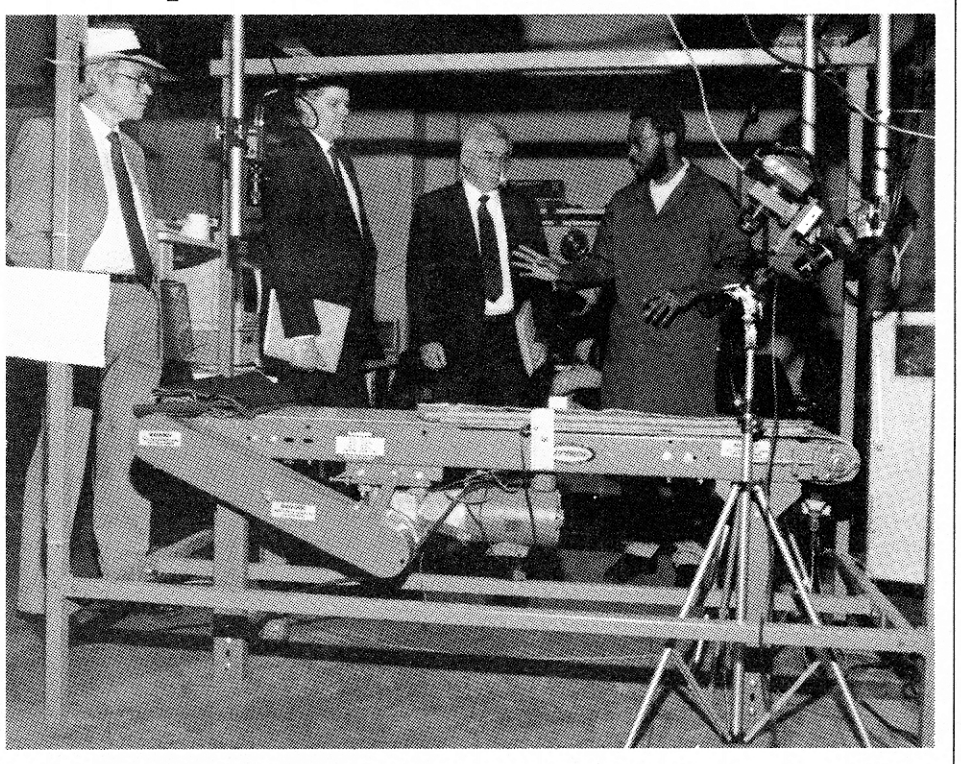
Current research in the facility principally involves robotics research and machine vision inspection for the poultry industry and use of commercial vision technology to detect fabric flaws in automated apparel fabrication plants. One of the many special challenges engineers are working on is developing "end effectors" (grippers) for robotic handling of poultry, which is soft and slippery—unlike objects robots normally handle. Others include investigating the use of color in machine vision for both food and fabric inspection, as well as three-dimensional and X-ray imaging of deboned poultry meat.

"While the two robot systems in our lab are being used commercially in other industries," says Craig Wyvill, director of the Agricultural Technology Research Program, "they have never been used in the poultry industry before. We're trying to adapt them to the speeds and operating environment of poultry processing while meeting the industry's economic constraints—not an easy task.

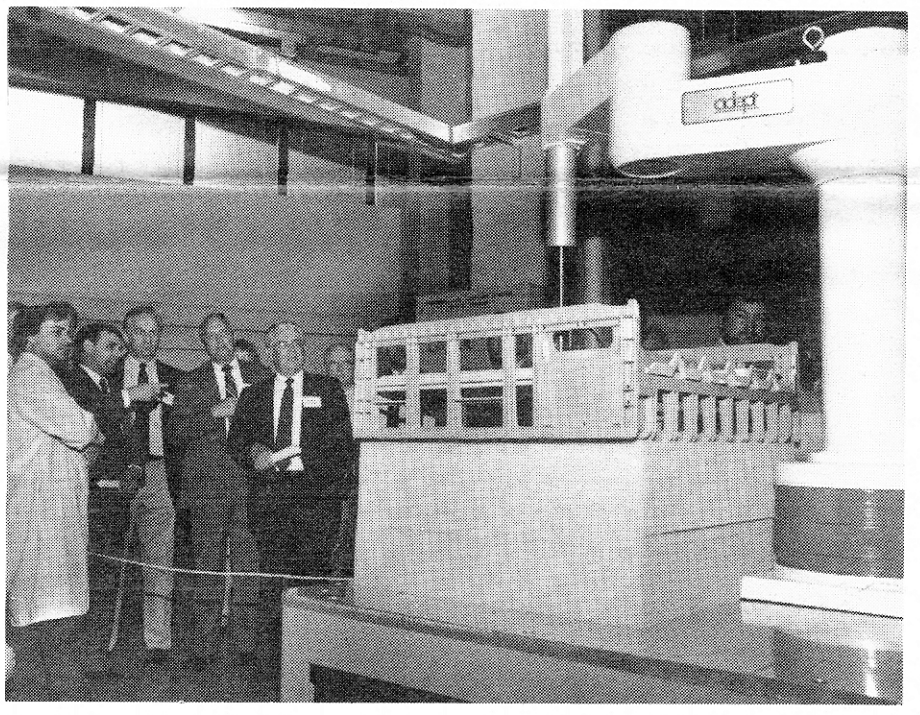
"As for the vision area," he adds, "inspection demands in both the poultry and apparel industries are very taxing to human workers. We believe the quality of the inspection process can be improved with the introduction of computer vision. The challenges in image acquisition and analysis are substantial, however, and our studies are defining new frontiers in these unique application areas."

Dignitaries attending the open house included State Senator Terrell Starr, who was instrumental in securing a $250,000 funding improvement package for the robotics research, and Abit Massey, the Executive Director of the Georgia Poultry Federation. Robert Hobbs, from the Legislative Budget Office, and Bill Tomlinson and John Brown, from the Governor's Office of Planning and Budget, along with key members of the Georgia poultry industry also were in attendance.

Demonstrations of key systems capabilities in the lab were given by Tom Single and Gary McMurray (SCARA robot), Chris Thompson and Wiley Holcombe (articulated arm robot), Wayne Daley and Richard Carey (machine vision development), and Chuck Ross (advanced sensors).



Wayne Daley explains the apparel inspection vision system to (from left) Mechanical Engineering Professor Wayne Book and visitors from the Society of Manufacturing Engineers Kevin Miller and Frank Riley. *(Photo by Rae Adams)*



Tom Single and Craig Wyvill (left) explain the function of the Adept (SCARA) robot purchased by GTRI with state funds to Senator Terrell Starr (right) and state budget officials Robert Hobbs and Bill Tomlinson. *(Photo by Rae Adams)*

New Programmatic Units Named

GTRI has designated the initial alignment of programmatic units under the restructuring scheduled to take place July 1. According to Bob Shackelford, initial assignments of staff and programs to the new units are being finalized and will be announced soon.

"Selections for leadership positions will be based on assessments of leadership skills and effectiveness," Shackelford says, adding "It is anticipated that the initial leadership positions for many of these units will be the same as those for the Division predecessors. For new units, assignments will be announced shortly."

The heads of off-site units probably will report to OOD for coordination of program development activities, Shackelford says. Their staffs will be assigned to program areas/units on the basis of program continuity subject to constraints dictated by sponsor relationships.

The programmatic units are named below. They will operate as partial cost centers, except for the Program Incubators, which may or may not be partial cost centers.

DIVISION-LIKE UNITS

- **Systems Programs**

Radar Systems Applications
Radar Modeling and Analysis
Radar Systems Development
Electronic Support Measures
Engineering Sciences
Concepts Analysis
Countermeasures Development
Threat Systems Development
Advanced Threat Technology
Microwave and Antenna Technology Development

- **Science and Technology Programs**

Physical Sciences
Materials Science and Technology
Environmental Science and Technology
Communications
Electromagnetics Environmental Effects
Electromagnetics Science and Technology
Electro-Optics
Computer Science and Information Technology
Aerospace Science and Technology

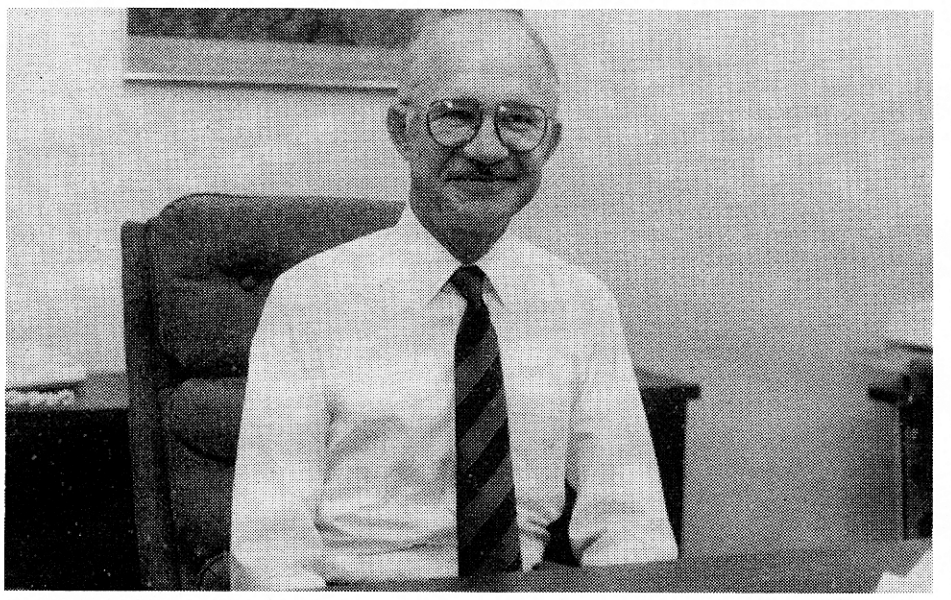
PROGRAM OFFICES
EW Techniques Analysis
Special Operating Forces
Observables

TECHNOLOGY TRANSFER/ OUTREACH
Economic Development

PROGRAM INCUBATORS
Acoustics/Vibration/Flow Control
Manufacturing Technology
Technology Policy

Spauschus Assesses Years at GTRI

In his ten-year career at GTRI, Dr. Hans Spauschus was one of its key players, both as a laboratory director and as Director of Internal Research. Following are some of his observations about GTRI that came out of a CONNECTOR interview prior to his retirement.



Dr. Hans Spauschus, who is retiring from GTRI and starting his own business. "Now I'll have a chance to try to do things the way I think they ought to be done after 40 years of working for other people," he says. *(Photo by Joe Schwartz)*

Connector: *Dr. Spauschus, in looking back over the past ten years at GTRI, what are some of the major changes you have seen?*

Spauschus: In 1980, when I first heard that GTRI, then the Engineering Experiment Station, was looking for a laboratory director, the sponsored research base was about $35 million annually. It's now over $100 million. The decade of the '80s has been one of spectacular growth for GTRI, largely because we had the right services available to offer to a strong and growing DoD (Department of Defense) market. I know of no other nonprofit contract research organization that fared as well during this time period.

C: *Looking ahead, what do you foresee for GTRI?*

S: Looking ahead to the '90s, GTRI will need to broaden its base of sponsor support as DoD requirements for R&D taper off or diminish. It's doubtful that other federal agencies such as DOE and EPA, where we can compete, will offer significant new opportunities. Although we have been proud of our level of funding from industry, the percentage is very small and has, in fact, fallen off in the last year.

C: *Why is that, and how can GTRI better serve the technical needs of industry?*

S: This is due in part to our lack of in-depth expertise in technologies important to industry and in part to contract practices that are not compatible with industry requirements. Industry is unlikely to fund work at GTRI unless it fits into their short-term or long-term plans and unless the GTRI capabilities in that field of technology are recognized as truly outstanding or unique. We can't equate our offerings to those of the academic schools that have the inducement of student recruiting as a basis for interest.

Regarding contractual requirements, industry is interested in a fixed price, a prompt initiation of work, and a firm commitment to produce timely results. Contrary to prevailing opinions, I believe that industry is generally fair in terms of ownership of technology rights, when properly approached. The procurement procedures that work when dealing with government agencies are not conducive to establishing industry contracts, although we claim to be flexible in our requirements.

C: *What are Georgia Tech's special strengths in technology?*

S: Georgia Tech has a unique opportunity to establish a broad technology network ranging from basic research through industrial implementation if our resources are effectively integrated. The existing elements at Tech include academic faculty and research centers for basic R&D; GTRI for applied research, development and testing; the field offices for maintaining direct relationships with large and small state industrial firms; and the Advanced Technology Development Center for nurturing new technology-based enterprises. Each of these units is busily pursuing its own interests, and little progress has been made in forging the linkages that would help the Institute achieve recognition as the leader in fostering superior technology.

C: *What goals would you recommend that GTRI set for the future?*

S: Restructuring is under way in GTRI, and it would be irresponsible to comment critically on the occasion of my departure. After ten years within the organization, however, recommendations of future goals would seem appropriate. I see three areas as especially worthy of attention:

• Diversification of capabilities and funding base by strengthening the organization in applied science and engineering disciplines such as physics, chemistry, materials science, mechanical engineering, and aerospace engineering. These areas won't grow or survive without advocacy at the director's level.

• Promotion and management of intellectual property as a source of income through licensing and technology transfer to industry.

• Flexibility in cost of GTRI services to sponsors to reflect market and competitive variances.

C: *Give us your assessment of the Internal Research Program and STGC.*

S: The GTRI Internal Research Program and its monitoring through the Senior Technology Guidance Council represent outstanding innovations for interjecting new ideas into a mature organization. Internally funded research releases pent-up creativity from a professional staff that has been restrained to follow sponsor contracts. The internal research procedures that have been developed for collecting, screening, awarding and monitoring good ideas through internal research projects are working smoothly. The program encompasses worthy goals such as technology transfer, academic linkages, student participation, and enhancement of professional recognition—all of which are built into the program. I can't say enough good things about the competence and dedication of the individuals serving on the Council. They are great people.

C: *What are your views on restructuring?*

S: GTRI is at a crossroads. The future is uncertain. We are not clear about our role in the new Georgia Tech organization, and our future business base is uncertain. Restructuring offers GTRI the opportunity to reassess its image and mission—to determine what it wants to be and then to go after it. I wish all of you the best in your endeavors to meet the challenges that lie ahead.

Team Characterizes Very-Large-Pore Molecular Sieve

by Martha Ann Stegar, RCO

In a neat bit of detective work, an interinstitutional team led by Rosemarie Szostak of GTRI has succeeded in identifying and characterizing a very-large-pore molecular sieve whose properties had eluded other researchers since it was patented by Union Carbide in 1982. Molecular sieves are used widely in industry as catalysts and adsorbents, and large-pore sieves are especially important in the catalytic cracking of petroleum.

The three principal investigators—Dr. Szostak, Ms. Kristin Sørby of the University of Oslo (Norway), and Dr. Judith Ulan of the National Center for Electron Microscopy at Lawrence Berkeley Labs—revealed their breakthrough discovery at the fifth annual meeting of GTRI's Multi-Client Zeolite Research Program. The meeting, attended by representatives of eight corporate sponsors, was held March 29-30 on the Georgia Tech campus.

They are the first to discover that this synthetic material—the aluminophosphate molecular sieve $AlPO_4$-8—contains very-large-pore 18-member rings similar to those of a material called VPI-5, which until now had been thought to be the only material with this structure. $AlPO_4$-8, prepared by mild thermal treatment of VPI-5, had heretofore been thought to contain a collapsed structure. The collaborators determined that $AlPO_4$-8 does maintain its 18-membered ring, but that its molecular layers slip sideways like an earthquake fault, in effect narrowing the pore channel.

Although such thermal transformation limits the usefulness of these materials, an understanding of their structure and instabilities will aid in synthesizing similar large-pore molecular sieves for use in petroleum refining, Dr. Szostak says.

The GTRI Molecular Sieve and Zeolite Research Group held its annual technical meeting for sponsors of its multi-client program March 29-30. Here the group takes a break on the steps of CRB. The program directors, Tudor Thomas and Rosemarie Szostak, are on the extreme right and left. *(Photo by Joe Schwartz)*

Tech Sails through Security Check

In its first major unannounced security inspection in five years, Georgia Tech came through with flying colors. "We received only four deficiencies for the entire facility," says Director of Security Bob Lang. "Compared with our last inspection, with 29, we have done an outstanding job in bringing ourselves into conformance with the required rules and regulations."

From March 19 through 29, six inspectors from the Defense Investigative Service subjected Georgia Tech to a very close evaluation of every aspect of its operations involving classified material. The only deficiencies cited involved:

• reproduction of working papers without bringing them into accountability,

• incomplete audit trails on approved classified automated information systems,

• transportation of classified documents to CCRF and return without notifying Security, and

• failure to properly mark all AIS media externally and internally with the proper information.

Lang says these deficiencies and some recommendations will be fully explained shortly in *The Security Blanket.*

The inspectors singled out two programs for review from the RFP stage to close-out instructions. Lang says, "Our performance in this area was exceptional, with all the credit going to our program people knowing what security is and how it's implemented."

Lang praised the employees of Tech and GTRI for the "heightened security posture regarding the use of classified material." He said, "I want to thank everyone involved. *You* are security and we know it. "

OOD Names Special Assistant

Andrew Harris has joined the staff of GTRI's Director's Office, effective April 2, as special assistant to the director for legislative and external affairs. He has had extensive experience in state government.

Prior to coming to GTRI, he served as special assistant for governmental affairs at the Georgia Department of Technical and Adult Education. He also has been a policy analyst with the Governor's Office of Planning and Budget and a research analyst for the Legislative Budget Office.

Harris has a bachelor's degree in political science and a master's in public administration, both from the University of Georgia. He recently was elected to the Decatur City Commission.

Harris will work through the President's and Chancellor's offices to serve as liaison between GTRI and pertinent components of state government. He will interact with the Georgia congressional delegation, municipal officials, and civic, community and professional associations as appropriate. He also will assist in coordinating GTRI public and community relations through the Research Communications Office and the News Bureau.

PROFESSIONAL ACTIVITIES

ECONOMIC DEVELOPMENT LAB

Melanie Largin has earned registration as a Professional Engineer and **Rick Duke** designation as a Certified Industrial Developer.

At the Globe '90 International Environmental Conference, **Edd Valentine** presented a paper, "Managing Environmental Challenges in the Food Processing Industries."

Nancy Davis received a Distinguished Award of Merit for the newsletter, *Environmental Spectrum*, in the Society for Technical Communication's annual competition. She and **Stephanie Babbitt** earned an STC Award of Achievement for "Computer Control of Poultry Houses," one in a series of Engineering Research Reviews.

In early March, **Claudia Huff** and **Susan Griffin** presented a workshop, "Getting in Touch with Your Creativity," for the 2nd Annual Conference of the Village Writers Group.

Sherman Dudley has been selected to serve a three-year term on the Board of Trustees for Leadership Georgia, an issues-oriented educational program affiliated with the Business Council of Georgia.

In February at the University of Miami, **Bill Riall** presented a paper, "Economic Justification of Technology: New Directions and Evidence from the Apparel Industry," at the 2nd International Conference on the Management of Technology.

David Clifton led a session on extending services to industry at the Modernizing America's Industrial Base Conference, held March 26-27 in Pittsburgh.

Steve Hays presented a paper, "Preventing Trenching Accidents," April 3 at the American Petroleum Institute's Pipeline Conference in Houston.

GTRI and the state Office of Energy Resources sponsored a conference April 18-20 on Jekyll Island. Entitled "Energy '90: Achieving Excellence Through Energy Efficiency," the conference offered a variety of exhibits and sessions. NASA's Bill Snoody gave the keynote address. EDL's **Mike Brown** spoke on "Energy Efficiency Program Management," and **Gerry Doubleday** on "Low- and No-Cost Methods for Energy Savings."

Tech's industrial extension efforts recently were cited by the National Governors Association and the Congressional Office of Technology Assessment.

ELECTROMAGNETICS LAB

Billy Livesay has won a Gold Standard Award from Four Pi Systems Corporation for the best technical paper on electronics manufacturing written in 1989. The paper, coauthored by Eugene R. Hnatek of Viking Labs/Honeywell and entitled "Quality Issues of High Pin Count Fine Pitch VLSI Packages," was presented at the IEEE International Test Conference in Washington (DC) last August. Drs. Livesay and Hnatek, along with Dr. Noel Donlin of the Army Missile Command, organized and conducted the first Georgia Tech short course on "Practical Insights into Microelectronic Quality and Reliability Issues." It will be offered for the second time May 8-11.

In January, Dr. Livesay, **Yancy Gill**, and **Garth Freeman** presented a paper, "Micromechanics of Solder Joints," at the SMART VI EIA-IPC conference in Lake Buena Vista (FL).

Dr. Livesay also presented a talk, "Defect and Stress Degradation of Microcircuit Materials," to the Indiana Chapter of the IES March 20.

Refereed journal articles by members of the Molecular Sciences Branch include: **Mike Nicovich, Christie Shackelford**, and **Paul Wine**, "Kinetics of the Br_2-CH_3CHO Photochemical Chain Reaction," *Journal of Photochemistry and Photobiology, A: Chemistry*, February-March; Nicovich and Wine, "Kinetics of the Reactions of $O(^3P)$ and $Cl(^2P)$ with HBr and Br_2," and Nicovich, Wine and **Kevin Kreutter**, "Kinetics of the Reactions of $Cl(^2P_J)$ and $Br(^2P_{3/2})$ with O_3," *International Journal of Chemical Kinetics*, March; Nicovich, Kreutter and Wine, "Kinetics and Thermochemistry of ClCO Formation from the Cl + CO Association Reaction," *Journal of Chemical Physics*, March 15; Nicovich, Shackelford and Wine, "Kinetics and Thermochemistry of Reversible Adduct Formation in the Reaction of $Cl(^2P_J)$ with CS_2," *Journal of Physical Chemistry*, April 5. In addition, a paper by Wine and William Chameides (Earth & Atmospheric Sciences), entitled "Possible Atmospheric Lifetimes and Chemical Reaction Mechanisms for Selected HCFCs, HFCs, CH_3CCl_3 and Their Degradation Products Against Dissolution and/or Degradation in Seawater and Cloudwater," appears in *Scientific Assessment of Stratospheric Ozone: 1989*, Vol. II, a World Meteorological Organization publication.

ELECTRONICS & COMPUTER SYSTEMS LAB

In March, **Eric Barnhart** made two presentations: on communications and direction finding at the short course on Advances in Millimeter Wave Applications and on network performance in the new short course on Modeling and Simulation of Communications Systems, which he developed with Education Extension and Prediction Systems, Inc.

At the IEEE/DARPA Tactical Communications Conference in Ft. Wayne (IN) this month, Barnhart organized and chaired a session on AJ/LPI Systems and Techniques; **David Poskevich** presented a paper, coauthored by **Bobby Wilson** and **Bruce Kim**, on "AJ/LPI Features of Foreign Communications Tranceivers," and **Steve Sharpe** presented a paper, coauthored by **Richard Moss** and **Bruce Warren**, on "Adaptive Communications Systems."

Barnhart also has been appointed to the IEEE Communications Society's Data Communications Systems Committee.

ENERGY & MATERIALS SCIENCES LAB

Three student employees will make presentations at the 67th Annual Meeting of the Georgia Academy of Science May 4-5 at Mercer University in Macon. They are: **Alice Long**, "Relationship between the Cation Additives and Structure of Alumino-Phosphate Molecular Sieves"; **Madulika Chaudhary**, "Catalytic Cracking Activity of SAPO-5 and SAPO-11 Molecular Sieves Crystallized in the Presence of HF"; and **Vicky Smith**, "Improving the Efficiency of Zeolites for the Removal of CO_2 from Air Recirculation Systems."

Joe Whitehead will present a paper, "Wide-Angle View Polymer Dispersed Liquid Crystals Displays," in May at the Society for Information Display. Coauthors are **J. W. Doane, J. L. West**, and D. S. Fieldley of Kent State University.

RADAR & INSTRUMENTATION LAB

In March, **Guy Morris** was guest lecturer at the IEEE course, "Aspects of Modern Radar," held in Boston. He spoke on ECCM and selected topics from his book, *Airborne Pulsed Doppler Radar.*

Jim Scheer organized and **Evan Chastain** chaired a session on "Coherent Radar System Performance" at the IEEE Southcon/90 Conference in New Orleans March 20. They presented a paper on "Coherent System and Sub-System Performance Estimation and Measurements," and **Mark Richards** gave a paper on "Amplitude, Phase, and Mismatch Errors in Discrete Fourier Transform Processing."

Employees who received degrees in March are **Mike Baden**, MSEE; **Scott Bostater**, MSEE; and **Mark Wasikowski**, PhD in AE.

Fred Nathanson was invited to give the keynote address at Radarcon 90, held in Adelaide, Australia, April 18-20. He spoke on new developments and emerging applications in radar. He is well known for his book, *Radar Design Principles, Signal Processing and the Environment*, and has a wealth of experience in U.S. military radar projects.

RESEARCH COMMUNICATIONS

John Toon won a Bronze Medal for "Excellence in News Writing" from the Council for the Advancement and Support of Education (CASE).

RESEARCH SECURITY

Ed Gilmore recently received his BA from St. Leo College in Florida.

SYSTEMS ENGINEERING LAB

The 12th Annual Electronic Warfare Program Review was held April 10-12 at the Cobb County Research Facility.

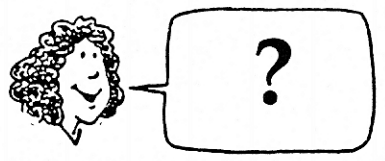
At the Biennial Conference on Psychology in the DOD, held this month at the Air Force Academy, **Ted Doll** presented a paper on "Psychophysical Requirements for Three-Dimensional Auditory Displays," and **Mike Kelly** presented a paper on "Human Factors in the Manufacturing of Military Uniforms." Doll also recently had an article on "Enhanced Detection with Bimodal Sonar Displays" published in *The Journal on Human Factors.*

Phil West will present a paper entitled "Approximate Switched-Markov Filtering for Nonlinear Systems" next month at the American Control Conference.

Ivan Howitt's paper, "Radar Warning Receiver Emitter Identification Processing Utilizing Artificial Neural Networks," has been accepted for presentation at the SPIE OE/Aerospace Sensing Symposium.

The Georgia Tech Student Government Association named **Mike Furman** Faculty Member of the Year for his dedication to teaching, in both classroom and laboratory.

QUESTIONS, ANYONE?



by Charles McCullough, HRD

I'm a research engineer and there are several options I'm considering to speed up completion of my advanced degree: going on a leave of absence, going on reduced time, and/or becoming a GRA. Which is the best course of action?

This is a perfect application for that all-purpose personnel answer, "It depends." That's because there are vast differences in the effect these three events have on everything from insurance to retirement to what your education will cost you. The best one for *you* is the one that is best for your personal circumstances. To help you make an informed decision, we will look at these options in the next two issues of the *Connector*. This month, we'll cover the leave of absence.

Leave of Absence

If you go on a leave of absence without pay to finish up your advanced degree, it would be an *educational* leave of absence without pay. Generally, educational leaves are granted for a maximum of one year, but only if there is a reasonable expectation that you will return to your faculty position at the end of the leave. While approval is granted for most educational leaves of absence requested by members of the faculty, a leave is not something to which you have an undeniable, automatic right: you must request it and obtain all necessary approvals — up through and including the Board of Regents— before it becomes a reality.

Salary: Naturally, your salary stops on Day #1 of a leave of absence without pay. You still continue to occupy a position in the GTRI budget and that budget position's funding will remain the same as your current salary; but your position will not receive any new-fiscal-year salary increases.

Vacation and Sick Leave: You won't accrue vacation and sick leave during your leave, but all of your unused vacation and sick leave will remain "on the books" and available for you to use when you return.

TRS: Your Teachers Retirement System (TRS) account remains active. Because you are earning no salary, neither you nor the State make any contributions to it during your leave; however, all time during which you are on an educational leave of absence is applicable toward your "years of service" with TRS.

Health Insurance: Your health insurance will remain intact and in effect during an educational leave of absence. The good news is that Georgia Tech will continue to pay its portion of your health insurance premiums during an educational leave, while you continue to be responsible for only your portion of the health insurance premiums, usually via quarterly invoices sent to you from the Benefits Section of the Personnel Division. The potentially bad news is that if you are a participant in one of the Health Maintenance Organizations (HMOs) and your educational endeavors will take you out of your HMO's service area, you may very well have severe limitations in what type of health care you may seek while you're away. Read your HMO benefits booklet carefully to determine how well you'll be covered if you'll be moving away.

Life Insurance: There's no change in your Tech-paid basic life insurance coverage, and the supplemental life insurance based on 1x, 2x or 3x your salary remains the same as long as you continue to pay the premiums.

Educational Costs: While on leave of absence, you are not eligible to participate in the Tuition Assistance Program for Research Faculty. If you are recognized as an out-of-state student, you will also lose your eligibility to register at Georgia Tech or any other unit of the University System of Georgia on the payment of in-state fees.

Other Options

If you're thinking of reducing your time to devote more efforts to your educational pursuits, refer back to the May-June 1989 *Connector* or PROFS CMCCULLO and I'll send you a reprint of that column. The Graduate Research Assistantship option will be the subject of next month's column.

PERSONNEL NEWS

ECONOMIC DEVELOPMENT LAB

Barbara Call is a new administrative secretary in the Environmental Monitoring and Research Branch.

ELECTRONICS & COMPUTER SYSTEMS LAB

Welcome to newcomer **Philip K. Kelly,** RE I.

Charles Albert and **Lois Savwoir** have resigned.

RADAR & INSTRUMENTATION LAB

The Technology Development Division welcomes **Brian Miller**, student assistant; **John Middleton**, laboratory helper; and **Matthew Homiller,** co-op.

SERVICE GROUPS

New employees are **Michael McCaskill,** mail clerk, and **Ann Redwine,** clerk IV, both in Human Resources. **Alisha Harper**, Accounting, has terminated.

Congratulations on their promotions to **Mary Granger**, senior accounting assistant, Supply Services, and to **Brian Hanlon**, mechanical technician I, Facilities Management.

SYSTEMS ENGINEERING LAB

Ken Thompson was named employee of the month for January for playing a key role in contract development and defining the original system concepts of what today is a multimillion-dollar project. He served as leader for software development, and later was associate project director and leader for LRU testing and subsystem integration.

The Concepts Analysis Division welcomes RS II **Dana R. Stock**s, who came in January from Pratt & Whitney. She earned her master's in mathematics from Auburn University. **Charlene Reid** has returned to CAD as a word processor specialist.

Tim Floyd began work March 26 as a RE II.

Resignations include **Jean Swank, Chris Hall, Tana Judy, Todd Calhoun, Mary Ann Cooper**, and **Patti Morgan.**

Personal Notes

EDL: The stork was busy in March: Tad and **Patti Parkhill** had a baby boy, Shane; Lydia and **Alan Barfoot** also had a son, John; and Martha and **Rick Tate** had a baby girl, Erin.

ECSL: Rose and **Brian Farris** are the proud parents of a baby son, Dillon.

HRD: **Lynn Gay** was married to Kevin Burt March 24.

RAIL: Condolences to **Sandra Saxon,** whose mother passed away in early April. Congratulations to Gail and **Jim Byrum** on the birth of Julie Hope in March.

SEL: Marianne and **Nick Pomponio** welcomed their third son, William Thomas, born February 7.

Members of the EMSL fan club swelled the crowd of Tech supporters at the Final Four playoffs in Denver. Here, Pat Crecine helps Joe Harris hold up a banner created by Brenda Hill. *(Photo by Jack Lackey)*

One of the Georgia Tech basketball team's most enthusiastic fan clubs—in EMSL—wore Tech T-shirts to work on game days during the season. We have no scientific proof of cause and effect, but it is a fact that they failed to wear their T-shirts the day of the UNLV game. Some of them are shown in front of the Baker Building before the Michigan State game. Left to right, Joe Harris, Sheron Meyers, Garth Freeman, Tom Starr, Ginny Myers, David Mohr, Ruth Thompson, Fred Corsiglia, Eliesh O'Neil, Joe Lichtenwalner, and Jack Lackey. *(Photo by Joe Schwartz)*

Picnic Coming Up

GTRI will have its annual Spring Fling picnic Thursday, May 24, 11:00 a.m.-2:00 p.m.. It again will be at the Burger Bowl, across from the Police building on Hemphill. There will be good food, games, prizes galore, and a surprise event not held before. Picnic chairman Lee Hughey says lots of volunteers are needed. In case of rain, the picnic will be held on the following Tuesday, May 29.

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