



RLE

# undercurrents

Volume 2, Number 2 • June 1989

A Newsletter for the RLE Community at MIT

## BEHIND THE SCENES AT THE DIGITAL SIGNAL PROCESSING GROUP

Deborah Gage, Administrative Assistant to Professor Alan Oppenheim in RLE's Digital Signal Processing Group (DSPG), believes the purpose of the DSPG office is to provide a positive environment for their students. This supportive atmosphere reflects Professor Oppenheim's high standards and friendly outlook. DSPG is a close-knit group of approximately 25 people. DSPG alumni keep in touch by writing to Deborah and sending photographs of their activities, marriages, and children, all of which are proudly displayed on the group's bulletin board in 36-615.

The DSPG area on the sixth floor of Building 36 includes a PC room equipped with a Macintosh Plus, IBM PC/AT, Apple LaserWriter printer and IBM Quietwriter printer. The DSPG library is a congenial place where students can check a word in Webster's, study textbooks, scan journals, examine theses of former students, or relax with one of the many paperback novels (or, as Deborah calls them, "thesis diversions").



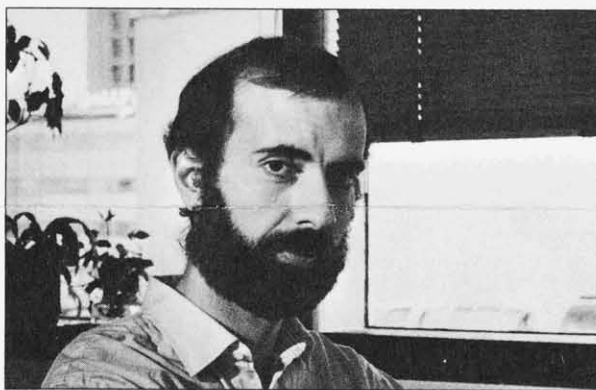
Deborah Gage earned her bachelor's degree in English literature, *cum laude*, from Emerson College in 1973. Since then, she has taught high school in Somerville, served as an administrative assistant for the Women's Technical Institute, and as administrative assistant for the Joint Action in Community Services program of the U.S. Department of Labor. Before coming to RLE in May 1986, she worked in MIT's Technology Licensing office. Deborah enjoys taking the computer workshops offered at MIT, and has learned many different software packages.



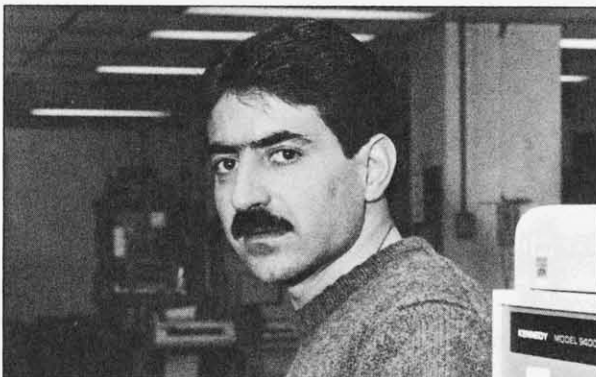
Part-time Senior Secretary Cindy LeBlanc works with Professor Jae S. Lim in DSPG. During the

past year, she has edited portions of Professor Lim's new textbook, *Two-Dimensional Signal and Image Processing*, which will be published this spring. Cindy, a Saugus resident, enjoys skiing, ice skating, and caring for her two-and-a-half-year-old daughter, Jillian. She holds an associate's degree from Marion Court Junior College, and worked at the Social Security Administration for ten years before coming to RLE in 1988.

Systems Engineer Giovanni Aliberti manages the DSPG computer facility, which consists of several SUN workstations, VAXs, personal computers, and highly specialized speech and video hardware. Before coming to MIT in 1985, he was employed at the Digital Equipment Corporation as a group leader in an advanced development team that designed the largest VAX ever built by DEC. Giovanni, a native of Milici, Italy, holds both undergraduate and graduate electrical engineering degrees from Northeastern University.

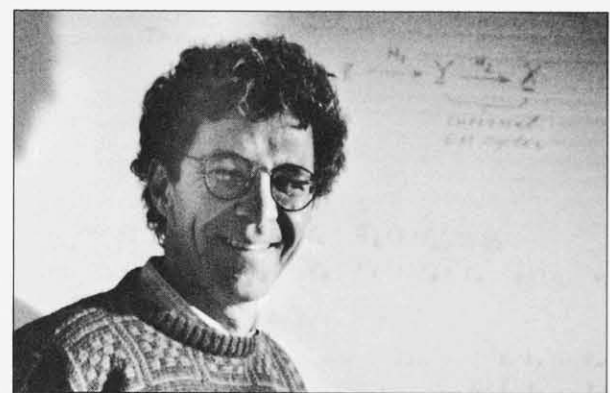


Giovanni explains that a major objective of digital signal processing is the development of new algorithms for image and speech processing. Ten years ago, it would have taken more than a year to prove these algorithms, but today, high-speed computers have cut the time required to a matter of days. As part of his job, Giovanni must keep up-to-date on the market for new computer equipment and software. He also deals with vendors to buy the best equipment available, installs new equipment and software, and helps DSPG users become familiar with the equipment. These responsibilities require a thorough understanding of the group's computer needs.



Once a week, Computer Operator Hassan Gharavy backs up the DSPG computer systems. Every month, he transfers the information (approximately one million pages) to tape. He also teaches computer electronics as a full-time assistant professor at Mass Bay Community

College, and is a part-time instructor at Northeastern University. An Iranian native, Hassan holds an M.S. degree in electrical engineering from Tufts University.



Dr. Ehud Weinstein has spent the past academic year at RLE as a Visiting Scientist studying theoretical aspects of array and signal processing and their application to radar, sonar, and communications systems. Ehud is a member of the Faculty

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## HERE AND THERE



Congratulations to Instrument Maker **Robert W. Aalerud** of RLE's Machine Shop for completing 25 years of MIT service. Bob will be inducted into MIT's Quarter Century Club this spring. He joined RLE as a Machinist B on June 29, 1964. Thank you, Bob, for your 25 years of dedicated service!

**Ramona Alston** became RLE's new Personnel Department representative on April 10. Ramona's extension is 3-4076, and her address is E19-239.

**Rosalie M. Uchanski**, Postdoctoral Associate in the Sensory Communication Group, and **Terrance M. Egan**, an '85 MIT graduate who is now a post-doctoral fellow at the Biology Department of Brandeis University, were married on November 26, 1988, in Chicago. The couple is residing in Waltham.

In January 1989, Principal Research Scientist **Dr. Victor W. Zue** and his research team moved to MIT's Laboratory for Computer Science. Dr. Zue will be maintaining a close affiliation with his colleagues in RLE's Speech Communication Group. His new address is NE43-257, and his new extension is 3-8513.

(Photos by John F. Cook)

## CONGRATULATIONS RLE GRADUATES!



SPOTLIGHT ON NEW RLE DOCUMENT ROOM STAFF



Betsy Colford (left) and Mary Ziegler

On January 30, 1989, RLE Headquarters welcomed Editorial Assistant Mary Ziegler and Publications Assistant Elisabeth (Betsy) Colford to the Communications Group. They are working under the direction of RLE Communications Officer Barbara Passero.

Editorial Assistant Mary Ziegler works on the production and distribution of the *RLE Progress Report* as well as other Document Room publications. In addition, she lends a helping hand to Document Room visitors, orders books and journals, maintains information on the Document Room's collection, and performs other tasks integral to the operation of the Communications Group. Using BookMaster, an IBM mainframe software, Mary will reformat this year's *RLE Progress Report* to better reflect the organization of the lab's research groups. The updated format will include the addition of a new subject/author index.

Mary earned an M.A. in German from Middlebury College while attending its partner university,

Johannes Gutenberg-Universitaet in Mainz, West Germany. After completing her degree, she was employed as Word Processing Applications Manager for the architectural firm of Burton Cohen Planungsgesellschaft in Wiesbaden, West Germany. Before coming to RLE, Mary worked in MIT's Campaign Systems office.

Publications Assistant Betsy Colford's responsibilities lie in the area of contract reporting. She maintains information on current awards and reporting requirements. Betsy also works with RLE's principal investigators and support staff to track publications and distribute research reports and reprints. In addition, Betsy will be involved in developing a contract reporting computer database to increase RLE's efficiency in this area.

Betsy earned a B.B.A. in marketing with a concentration in management from the UMASS/Amherst. Previously, she has worked as an Account Supervisor/Programmer for Survey Tabulation Services, Project Manager for Cahners Publishing Company, and an assistant to Susan Gaskell in MIT's Personnel Department. This spring, Betsy served as RLE's representative for the Community Service Fund.

DSPG from page 1

of Engineering at Tel Aviv University in Israel. Ehud enjoys the free exchange of information with DSPG students. He believes that DSPG's positive atmosphere fosters excellence in research and warm friendships among DSPGers. Ehud says, "This is the way collaboration should be." He has also been an adjunct scientist at the Woods Hole Oceanographic Institution since 1978. Ehud, wife Orna, and identical twin sons Omri and Assaf, will return to Israel this September.

A WARM WELCOME TO . . .



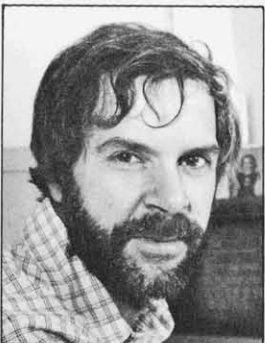
for the Customs Service of the Republic of China.

On February 1, 1989, **Ming-yu Wei Lin** began work as Professor Jin Au Kong's part-time Senior Secretary in RLE's Electromagnetics Group. A Taiwan native, Wei Lin holds the B.S. in Business Administration from National Taiwan University. Prior to coming to the U.S., Wei Lin worked



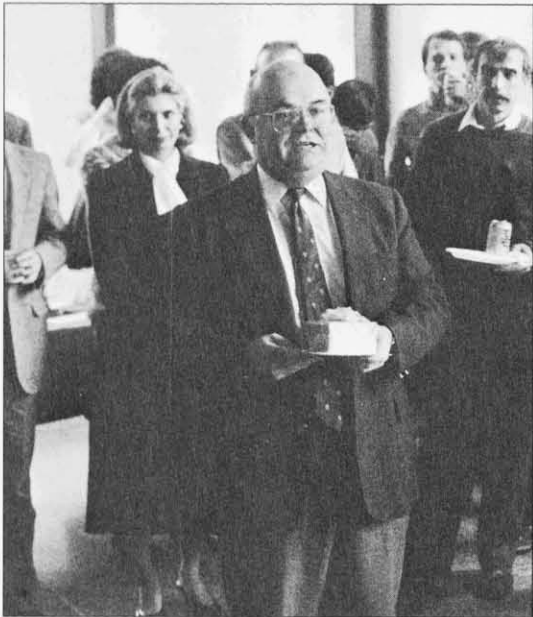
publications specialist at the Charles Stark Draper Laboratory for six years.

Administrative Assistant **Kathleen Rogness** has worked with Professor Jin Au Kong in RLE's Electromagnetics Group since March 1989. Kathleen, a Minnesota native, earned a bachelor's degree in economics from the University of Minnesota. Before coming to RLE, she was a



Research Specialist **Jeffrey Saeger** joined RLE's Sensory Communication Group in March 1989. Previously, he worked for the Army's Acoustics Laboratory and at various technical and engineering positions in the Boston area. Jeffrey holds a B.S. degree in electrical engineering from Northeastern University.

(Photos by John F. Cook)



RLE Director Jonathan Allen announces retirement gift to Kyra Hall (in absentia).



Dorothy Fleischer indulges Santa's wish to kiss a bearded lady.



RLE's red-nosed Rudolph, John Weigel.



Jeannie Lauricella is "numbered."



Dave Foss sides with Santa.



Santa has some suggestions for retiring Facilities Supervisor Joe Sincuk.



Don Clements is the winner of the Santa Sweepstakes.



Barbara Passero says, "Oh, no! Is this going to be embarrassing?"



John Peck receiving a "car phone" from Santa.

RLE undercurrents

*undercurrents* is a publication of the Research Laboratory of Electronics for the RLE community at MIT. The following individuals contributed their time and energy to this issue: John F. Cook, Dorothy A. Fleischer, David W. Foss, Barbara Passero, Robert H. Priest and Donna Maria Ticchi.

Inquiries may be addressed to:

RLE *undercurrents*  
Research Laboratory of Electronics (36-412)  
Massachusetts Institute of Technology  
77 Massachusetts Avenue  
Cambridge, MA 02139

(Photos by Robert Priest)