



RLE

undercurrents

Volume 6, Number 2 • Spring 1993

A Newsletter for the RLE Community at MIT

Behind the Scenes in RLE's Sensory Communication Group

"I can't get no psychoacoustic satisfaction," reads a sign on an office door. "Ears Only," admonishes another sign posted on one of the four soundproof booths. When you enter the 7th floor area in Building 36 occupied by RLE's Sensory Communication Group, it's hard not to pick up on the intense frenetic energy and productivity enlivened with a sense of fun shared by the 45 people who work and conduct research in this group. The office area is decorated with student artwork, posters, and prints. Postcards, baby photos, and notices of all sorts are plastered on the group's bulletin board. A blackboard with a mysterious chalk drawing serves as forum for the exchange of ideas. A once-thriving brown plant hangs in the hallway; no one will allow it to be removed for a proper burial.



Nora Luongo is engaged in one of her favorite pastimes--shopping! (Photo by John F. Cook)

Twelve photos of young children are displayed on the wall opposite the reception desk. "Can you guess which one I am?" asks Administrative Secretary **Eleanora M. Luongo**. Nora points to the photo of a cute little girl with curly hair and then names the other group members: Pat Zurek, Charlotte Reed, Louis Braida, Nat Durlach, Mandayam Srinivasan, Xiao Dong Pang, Rosalie Uchanski, Steve Colburn, Janet Koehnke, Bill Rabinowitz, and Lorraine Delhorne.

While humming bits from familiar operas or popular songs, Nora handles her busy schedule with grace and a sense of humor. Before taking her current position with Senior Research Scientist Nathaniel I. Durlach in 1984, she worked at a variety of temporary office assignments. Nora has held several unusual positions over the years, including stints as a solderer during the 1950s and a product demonstrator in the window of the old Woolworth's on Tremont Street.

A native of Boston's old West End (which was razed for the construction of Government Center), she remembers two famous neighbors: movie star Ruth Roman, who let Nora try on her makeup, and *Star Trek's* Dr. Spock, Leonard Nimoy. Nora currently lives in Malden. She enjoys movies, and loves both the opera and shopping. She has two grown children, Gary and Laura. This spring, on her yearly trip to Florida, Nora joined Laura, Laura's husband Vincent, and grandson Michael on a Disney World vacation.

Administrative Assistant **Ann K. Dix** is working toward a master's degree in speech and language pathology at Boston University and is interested in communication in a broad sense. She enjoys her part-time position with Professor Louis D. Braida because, in addition to regular secretarial duties, she carries out audio and audiovisual experiments, hires experimental subjects, and is involved with many of the students and their research projects. Before joining the Sensory Communication Group



Ann Dix enjoys working with students on their research projects. (Photo by John F. Cook)

in 1990, Ann worked with Professor Bruno Coppi in RLE's Plasma Physics Group for one year.

Ann grew up in Connecticut and graduated from Colorado State University in 1975 with a bachelor's degree in French. For 12 years, she lived in California, where she worked at a textbook publishing company as an editorial assistant and telemarketing manager and moonlighted as the lead singer of a rock band. In addition to her family's tradition of bird-watching, Ann enjoys gardening, walking, and reading.

"Challenges are what you rise to, and crises remind you that you're alive," are the words that Research Specialist **Seth M. Hall** lives by when talking about his work as computer systems manager for three RLE research groups: Sensory Communication, Speech Communication, and Auditory Physiology. Seth feels strongly that

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Seth Hall, a veteran aerobatic pilot, is president of the Mohawk Soaring Club of North Adams. (Photo by John F. Cook)

aRtLE

When the Sherman Fairchild Electrical Engineering and Electronics Complex was built in 1973 as the home for RLE and the Department of Electrical Engineering and Computer Science, MIT's "One Percent for Art" policy funded the acquisition of original artwork for the complex's public spaces. One of the complex's more conspicuous pieces of artwork is perhaps its most appropriate: the steel portrait of Sherman M. Fairchild located in the lobby of Building 36.

Sherman Fairchild was born in Oneonta, New York, in 1896. His father, George W. Fairchild, was a U.S. congressman and a founder of IBM. Early in his life, the younger Fairchild demonstrated inventive brilliance. The founder of Fairchild Camera and Instrument Corporation, his achievements included the first aerial camera, the cargo plane, and hydraulic brakes and landing gear for aircraft.

The sculpture of Sherman Fairchild was a tribute created by the British artist Ros Newman. Born in 1939 in the Highgate section of London,



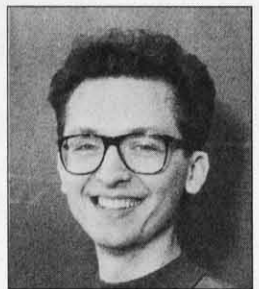
Steel portrait of Sherman M. Fairchild by Ros Newman on display in the Building 36 lobby.

she studied at the Chelsea School of Art and the Hammersmith College of Art. It is believed that the artist's work caught the attention of then MIT President Jerome B. Wiesner, and he recommended Newman for the sculpture's commission in 1973. The portrait, which measures 34x22x14 inches, is made of thin strips of steel, welded together piece by piece. Its exterior surface was smoothed using a series of grinding processes and then electroplated to render it untarnishable. Given Sherman Fairchild's creative and investigative foresight, one might imagine that the swirling, futuristic quality of this work would have met with his approval.

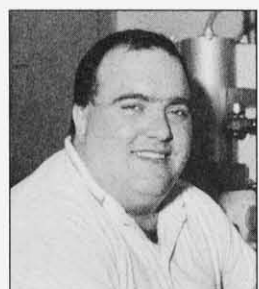
New Faces



On April 14, 1993, Senior Office Assistant **Deborah S. Manning** began part-time positions with both Professor Emeritus William F. Schreiber and Professor Peter L. Hagelstein of the Optics and Devices Group. Before coming to RLE, Deborah worked at MIT's Center for Biological and Computational Learning. She studied the classics at Manhattanville College in New York and writing at Western Kentucky University. A writer and free-lance editor, Deborah enjoys reading, cooking, and spending time with her husband Michael and their two cats. (Photo by John F. Cook)



Research Specialist **Euclid E. Moon** started working with Professor Henry I. Smith in the Quantum-Effect Devices Group on February 1, 1993. Euclid is in charge of designing the alignment stages of a new x-ray source at RLE's Submicron Structures Laboratory and finds it exciting to fine-tune the x-ray source using hands-off controls. A Boston native and the son of the late Professor Parry H. Moon, he received a bachelor's degree in physics from MIT in 1989. Since 1990, he has been a UROP student and is currently taking courses in electrical engineering at MIT. His hobbies include skiing, reading science fiction, playing chess, and hiking. (Photo by John F. Cook)



Robert D. Sisson joined the Quantum-Effect Devices Group on November 2, 1992, as a Technician "A" with Professor Henry I. Smith. Robert, who earned a bachelor's degree in biology from Curry College in 1980, was a technician at Lincoln Laboratory for almost eight years before coming to RLE. A Civil War buff, Robert enjoys camping and hiking in Maine, salt- and freshwater fishing, and reading. He and his wife Karen have three sons, aged four, six, and eight. (Photo by John F. Cook)



Sharon J. Worley began her position as a part-time Senior Staff Assistant in the Advanced Television and Signal Processing Group with Professor Jae S. Lim on March 17, 1993. A Columbus, Ohio, native, Sharon earned a master's degree in art history from Tufts University in 1991 and volunteers at Harvard's Busch-Reisinger Museum four days a week. Previously, Sharon was a research assistant at Boston's Museum of Fine Arts. Sharon enjoys her spare time with her husband William Murphy and seven-year-old daughter, Evelyn. (Photo by John F. Cook)

Sensory Communication

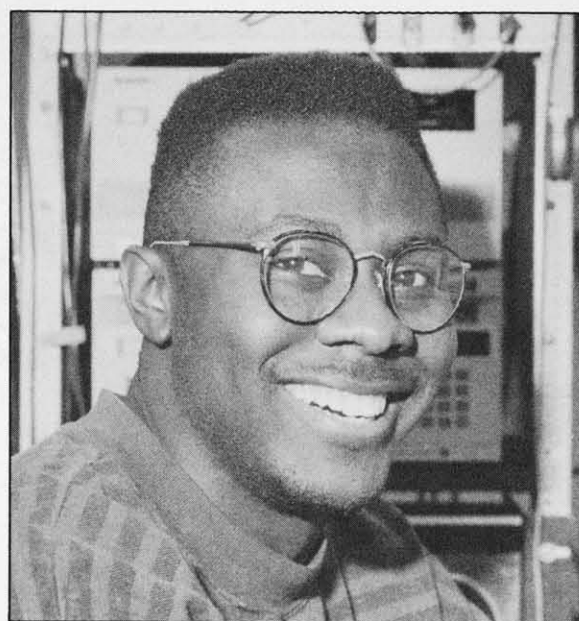
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keeping up-to-date on technological advancements provides enormous benefits to the researchers he serves. In order to accommodate them with greater computing flexibility in a more economical manner, Seth has replaced a DEC-20 system and several old VAX computers with new high performance VAX and UNIX workstations.

Seth has worked as a technician at Digital Equipment Corporation and as a toolmaker at Advance Manufacturing, both in Westfield, and as a machinist at the Kollmorgen Corporation in Northampton. In 1983, Seth enrolled in the computer science program at the University of Massachusetts at Amherst. After leaving the program, he became a graphics programmer and systems manager for the school's college of engineering. He joined RLE in 1988.

Soaring is Seth's first love. An aerobatic pilot for 14 years, he owns two power planes, a 1946 Taylorcraft two-seater and a 1968 Mooney four-seater. He is president of the Mohawk Soaring Club, based at the North Adams airport. "Anyone in RLE is welcome to soar with us for a minimal guest fee," Seth offers. In 1991, he and the club were featured in a story aired by WHDH-TV that described the history of Mount Greylock.

Technical Assistant **Mabayoje "M.T." Tuyo** works with Principal Research Scientist Patrick Zurek on developing software prototypes for experiments such as the keyed speech laser disc



M.T. Tuyo attends the University of Alabama in Huntsville and plans to attend graduate school at MIT. (Photo by John F. Cook)

project. He also assists in the design, construction, and maintenance of the group's lab equipment. A senior majoring in computer engineering at the University of Alabama at Huntsville, M.T. plans to attend graduate school in electrical engineering at MIT. While still a student at Cambridge Rindge and Latin High School, he was a network technician at MIT's Media Lab and initially came to RLE as a technician programmer in the summer of 1989. M.T. is a member of the National Society of Black Engineers and likes to play pickup basketball.

Short Waves...

On January 30, 1993, Administrative Assistant **Sally C. Bemus** of the Digital Signal Processing Group and Pavin K. Santiago were married in North Quincy, Massachusetts. After a month-long honeymoon in India, the Santiagos now reside in East Cambridge.

Lochan and **Srinivas Devadas** were married on October 12, 1992, in Cambridge. Srinivas is an Associate Professor in RLE's Circuits and Systems Group. The couple resides in Boston.

MIT's Council for the Arts awarded a grant to Senior Staff Assistant **Wendy E. Hunter** of the Radio Astronomy Group. Last December, Wendy, a soprano, performed a concert with piano accompaniment that included the works of American composers Samuel Barber, Stephen Sondheim, Carlisle Floyd, and Gian Carlo Menotti.

Visiting Scientist **Franz X. Kartner** of the Optical Communications Group and wife Pieter announced the birth of Anna Marie on March 26, 1993.

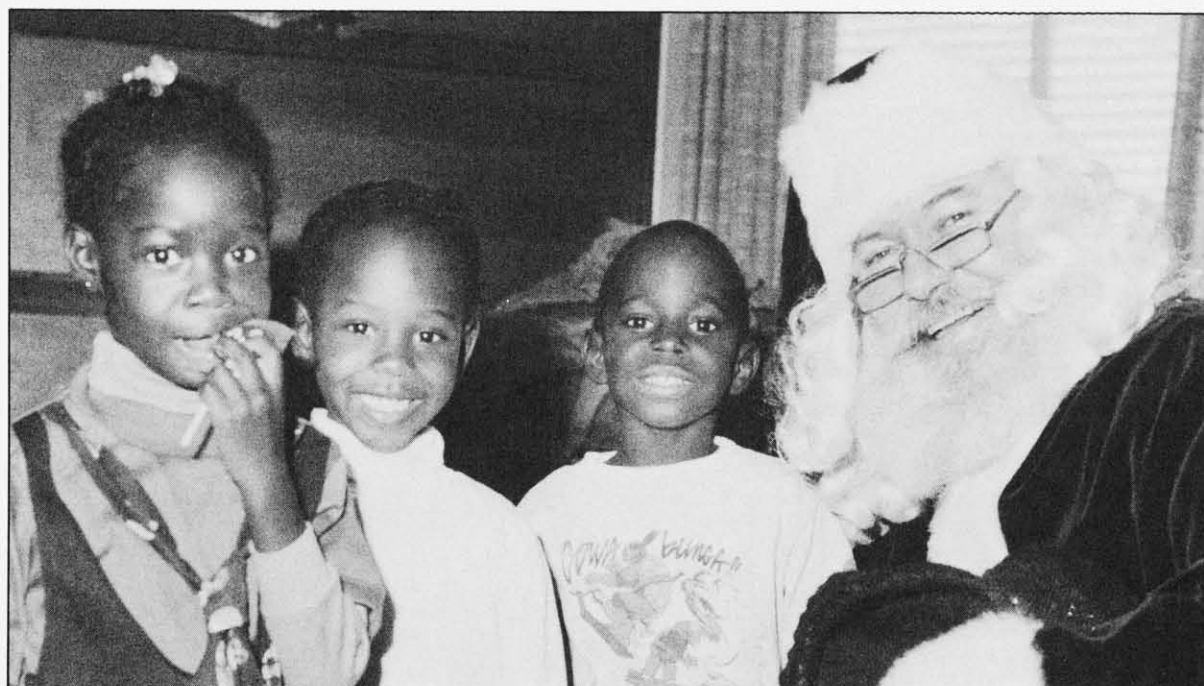
Fiscal Administrator **Vicky-Lynn Taylor** of RLE's Travel Office served as a panelist at the 13th annual Thomas Cook Business Travel Symposium,

which was held in Boston last November 10th. As a participant in the university travel management forum, Vicky joined colleagues from colleges across the country to discuss the quality of travel services at the university level.

On April 12, 1993, Administrative Assistant **Arlene Wint** of the Speech Communication Group and husband Linden welcomed Kevin Jerome to the family. Kevin joins his older siblings—Stacy-Ann, 10, and Greg, 8.

Research Scientist **N.C. Franco Wong** of the Optical Communications Group and wife Teresa Keh celebrated the arrival of their son, Eliot, on April 4, 1993.

In a ceremony on March 23, 1993, five RLE faculty and staff members were installed in MIT's Quarter Century Club: **Professor Jonathan Allen**, RLE's Director; Research Affiliate **Dr. H. Steven Colburn** of the Sensory Communication Group; **Professor Shaoul Ezekiel** of the Atomic, Molecular, and Optical Physics Group; Principal Research Scientist **Dr. John J. Guinan Jr.** of the Auditory Physiology Group; and **Professor Henry I. Smith** of the Quantum-Effect Devices Group.



Santa Claus took time out from his busy holiday schedule last December to visit with the younger set during RLE's Holiday Party. From left: Vanessa Beckford (cousin of Purchasing Assistant Maxine P. Samuels of RLE's Purchasing Office), Danielle Hamlett (daughter of Senior Secretary Yvonne F. Hamlett of the Aeronautics and Astronautics Department), Roshaun LaForce (Maxine's son), and jolly old Saint Nick. (Photo by David W. Foss)



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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 Priest, and Mary J. Ziegler.

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undercurrents is printed on recycled paper.